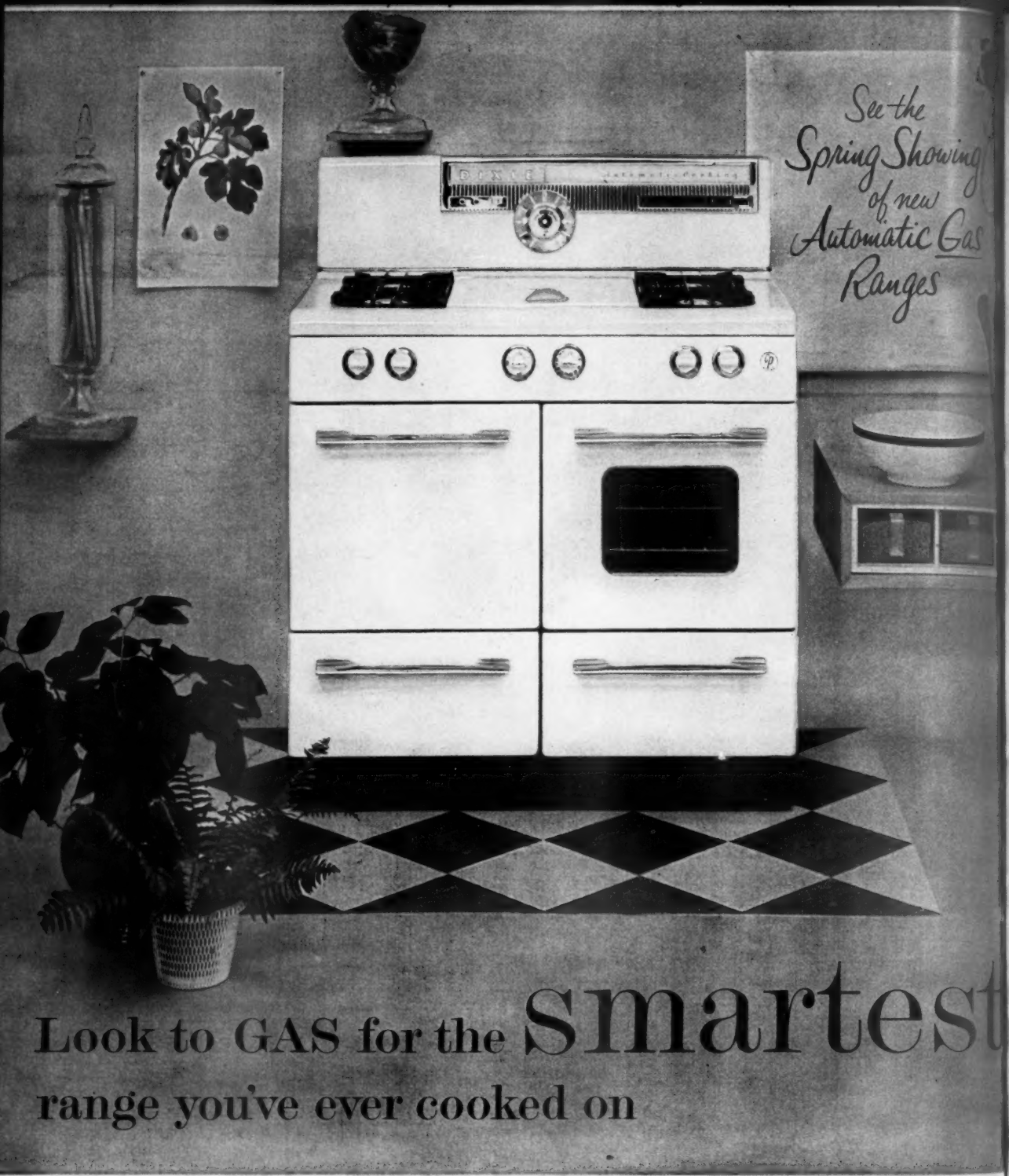
AMERICAN GAS ASSOCIATION

Monthly

APRIL
1954



Look to GAS for the smartest range you've ever cooked on

y the week-end you can actually be cooking on the smartest investment ou ever made in your life: a new automatic Gas range. Chances are no ne could pry you away from it those first few days. You'll want to marvel ver the way the flame responds instantly and precisely to your merest uch. You'll want to peek, sniff and enthuse over the smokeless broiling; n back to watch the cake turning a golden brown; turn on the timer for e joy of hearing it buzz. But if you do leave your range (reluctantly!), ou can set it to turn the oven on and off automatically; you can make it t just as if you were there. No other ranges are more automatic, cook as erfectly, give you as many modern features. Yet the new automatic Gas nges cost less to buy, install and use. AMERICAN GAS ASSOCIATION

Only Gas gives such matchless performan

At Texas Illinois compressor station near Lufkin, Tex., men work on 12-inch high pressure bypass, safety device to aid uninterrupted gas flow

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PRESIDENT EACKER'S New England address (see page 16) shows how the gas industry is putting the accent on action through its PAR Plan and the Gas Industry Development Program. In this issue, the Monthly reveals several additional areas where specific action is being taken. . . . Lake Shore Gas Company has initiated a powerful public relations and promotion program of interest to other companies, large or small. . . . George S. Young, president, The Columbia Gas System, Inc., has written to the presidents of all range firms in Columbia's territory urging full support of the new gas range principles exhibited at the A. G. A. Laboratories in January. "Be assured," Mr. Young states, "that our entire business promotion department will actively assist you in the marketing of new and improved gas ranges." . . . Springfield Gas Light Company's 1954 Gas Show and the progress that company is making on dealer and manufacturer relations are described in an on-the-spot report this month. . . . We suggest that you set aside a few minutes to read each of the articles mentioned, then pass this issue on for others in your company to study.

JAMES M. BEALL
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VOL. 36 NO. 4

• Subscription $3.00 a year - Published eleven times a year by the American Gas Association, Inc. Publication Office, 73 Main Street, Brattleboro, Vt. Publication is monthly except July and August which is a bi-monthly issue. Address all communications to American Building, Brattleboro, Vermont, or to 420 Lexington Ave., New York 17, N. Y. All manuscript copy for publication should be sent to the editorial offices in New York. The Association does not hold itself responsible for statements and opinions contained in papers and discussions appearing herein. Entered as Second Class Matter at the Post Office at Brattleboro, Vermont, Feb. 10th, 1922, under the Act of March 3, 1879. Cable addresses: American Gas Association, "Amerigas, New York"; American Gas Association Testing Laboratories, "Amerigaslab, Cleveland."

STRAWS in the wind

● *Designed to give you a panoramic*

OUR BIG SALES POTENTIAL

During the next five years (1954-58) there will be a potential market for nearly 59 million gas appliances, if economic conditions hold at their present level. This is the dramatic conclusion of a new study of gas appliance potentials just completed by the A. G. A. Bureau of Statistics.

The study was conducted as a part of the Gas Industry Development Program and can be of great assistance to the industry in planning its future sales strategy.

Compare nearly 59 million appliances with 36.3 million gas appliances sold during 1948-52 and it is easy to see the immensity of the job ahead. This huge potential market is a clear challenge to our ingenuity and planning. Fortunately, many of the weapons to meet this challenge already exist. Foremost among these is the type of advance sales planning exemplified by the A. G. A. 1954 Gas Industry Sales Plan Book. This approach will be repeated for 1955. It deserves the wholehearted support of a united gas industry. In addition, the gas industry must marshal all its public relations and promotional forces to build a healthier climate for gas appliance sales.

It is within our power to take these steps. It is inconceivable that we would neglect to do so.

(Full story of the new gas appliance sales potentials appears on page 11.)

EQUIPMENT GUIDE

Types of equipment and various applications of gas in chemical processes are detailed in Information Letter No. 60 prepared by the A. G. A. Chemical Processing Subcommittee of the Industrial Processing Committee. It is specifically designed to assist industrial gas engineers in their contacts with chemical plants.

STANDARDS REVISION

Industrial Gas Practices Committee, augmented by representatives of insurance companies and utility operating or distribution departments, has completed a two-day session on revision of standards for installation of consumer-owned gas piping and installation of gas utilization equipment on industrial and commercial gas premises. Part of the draft is in final shape for submission for approval under the Existing Standards Methods.

LPG CODE REVISIONS

Clark F. Jones, gas field service engineer for National Fire Protection Association, advises that reprints of the newly adopted revisions of the LP-Gas utility code can be secured from NFPA, 60 Batterymarch Street, Boston 10, Mass., at nominal charge. This new standard is a great contribution to improved design of LPG systems used at utility plants particularly with respect to fire and explosion safety, Mr. Jones told the MONTHLY.

PROMOTION IDEAS

Look for "Home Service Promotion Ideas for Modern Gas Equipment," a booklet of 221 "quickie" promotions for use in demonstrations—platform and sales floor. Collected by A. G. A. Home Service Committee and compiled by the 1954 chairman, Mary Huck. Order from A. G. A. at 25 cents a copy.

NATURAL GAS BARGES

An engineer-inventor is working on a unique plan for transporting natural gas in barges drawn by towboats that would use gas from their payloads as fuel. Eight of the specially designed, heavily insulated "tank" barges are reported already built and now being equipped in Pascagoula, Mississippi.

COMPRESSOR REVOLUTION

A major revolution in compressor station operations is reported by The Peoples Natural Gas Company. Under Howard M. Joiner, chief mechanical engineer, efficiency has been raised and expenditures cut $300,000 since May 1951 through a plan involving changeover of several compressor installations from multi-unit to one-man operation.

ATTENTION EDITORS

Recommended reading for persons connected with company publications is "Printers' Ink Directory of House Organs." See specifically the articles in this directory, "House Publications Help Employees and Management Solve Mutual Problems" and "Fifty Ways House Publications Can Promote the Sale of Goods and Services."

RETIREMENT AGE

At least one large gas company has recently raised its mandatory retirement age for employees from 65 to 68, with the proviso that employees can elect to retire at 65. Is this the beginning of a trend?

DRYER ACCEPTANCE

All signs indicate that the industry is getting behind the gas clothes dryer and welcoming it to its rightful place in the gas appliance family. More manufacturers are entering the gas dryer market, more companies are sparking original promotions of this dramatic new appliance. Sales of A. G. A. spring promotion kits on the gas dryer have hit an alltime high (a PAR activity).

TESTIMONIAL FROM GAS

The gas industry takes its hat off to competition which has taken its hat off to the gas industry this spring by copying our promotional campaign slogans.

WELCOME TO THE FOLD

We welcome a handsome new member to the family of gas company publications. Published for employees of Northern Indiana Public Service Co., the magazine's first issue announced a "name contest" open to all employees except executive staff and public relations department. Featured are a special greeting from Dean H. Mitchell, president, and announcement of a large expansion program under which $9 million will be spent for service to new gas and electric customers and $8 million for gas distribution facilities this year.

NOTES ON MRS. AMERICA

State finals in the gas industry's Mrs. America contest are drawing large crowds throughout the country. Use of national celebrities as judges has drawn wide public response, particularly in Missouri, where the appearance of Liberace, TV sensation, brought the contest front page newspaper publicity. A. G. A. is sponsoring the national contest as a PAR activity.

PLEASE INFORM

A recent survey by a large New England utility revealed the fact that only half of its customers had any idea whatsoever that rates were controlled by a state commission. Would the figure be more or less than half in your area?

NEW "GASEOUS FUELS"

Second edition of "Gaseous Fuels" is now available—completely revised, corrected and enlarged. Four new chapters have been added and research developments are considered at length (see report in "Industry News" section of the MONTHLY).

NEW SALES PITCH

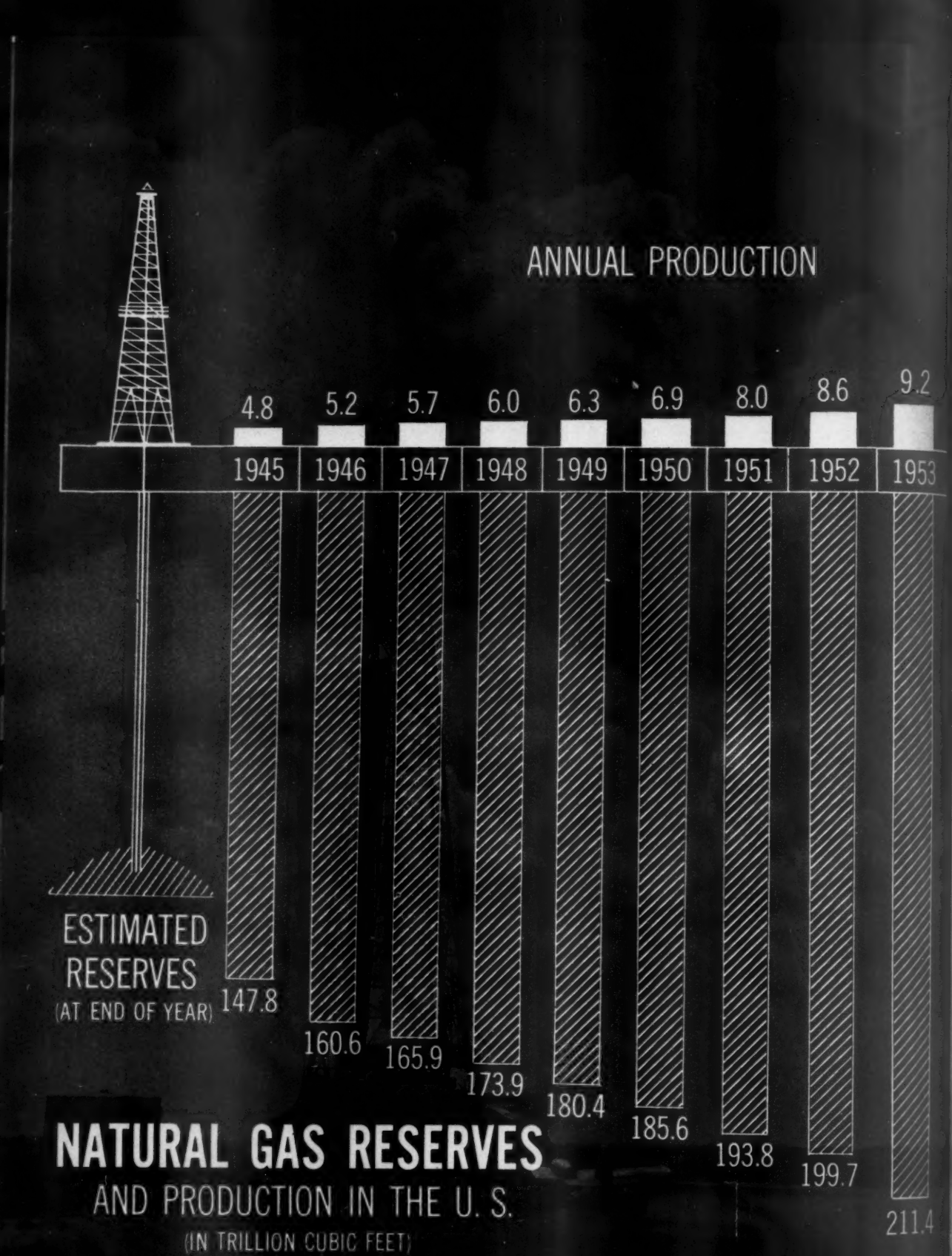
Here's a dramatic new slant on sales presentations which won a company award for Frank Fore, Magic Chef, Inc. Using slides and a tape recorder, Mr. Fore took his listeners behind the scenes of restaurant operation to show them how a broiler actually performs. Slides of the broiler in use were accompanied by running comments recorded in well known restaurants.

FIELD WELDING

Second edition of "Tentative Standard for Field Welding of Pipelines, API Standard 1104" is available from J. A. McNally, American Petroleum Institute, 50 West 50 St., New York 20, N. Y. Tentative standard and revisions were prepared by a committee representing A. G. A., API, Pipeline Contractors Association, and National Electric Manufacturers Association.

A. G. A. LEGAL FIRST

American Gas Association is planning its first symposium on "Current Legal Problems in the Gas Industry" to be held in New York City June 7-11 in cooperation with the Practising Law Institute (preliminary details appear on page 24).


ANNUAL PRODUCTION
4.8
5.2
5.7
6.0
6.3
6.9
8.0
8.6
9.2
1945
1946
1947
1948
1949
1950
1951
1952
1953
ESTIMATED RESERVES
(AT END OF YEAR)
147.8
160.6
165.9
173.9
180.4
185.6
193.8
199.7
211.4
NATURAL GAS RESERVES
AND PRODUCTION IN THE U. S.
(IN TRILLION CUBIC FEET)

Gas reserves show record rise

Proved recoverable natural gas reserves in the United States on December 31, 1953, totaled 211.4 trillion cubic feet, an increase of 11.7 trillion cubic feet over reserves of 199.7 trillion cubic feet a year earlier, according to a joint report of the Committee on Reserves of the American Gas Association and the American Petroleum Institute. This was the largest increase in proved recoverable reserves since 1946. These reserves achieved a new record high level after an all-time high production of 9.2 trillion cubic feet of natural gas used in 1953. The previous record production was 8.6 trillion cubic feet of natural gas in 1952.

The A. G. A. Committee on Natural Gas Reserves estimated proved recoverable reserves of natural gas liquids on December 31, 1953 also had risen to a record level of 5.4 billion barrels. This compares with a previous high of 5.0 billion barrels at the end of 1952. This increase was registered despite a record production of 303 million barrels of natural gas liquids last year. N. C. McGowen, United Gas Corp., is chairman of the A. G. A. committee.

Crude oil reserves on December 31, 1953 totaled approximately 28.9 billion barrels, compared with 28.0 billion barrels at the end of 1952. The total estimated liquid hydrocarbon reserves on December 31, 1953, were 34.38 billion barrels, compared with 32.96 billion barrels a year earlier.

The discovery of 7.1 trillion cubic feet of new natural gas reserves in 1953 as compared with 5.4 trillion cubic feet of reserves in new fields brought in during 1952, emphasizes the important increase in exploration activities resulting from the ever-increasing demand for natural gas. Further exploration and drilling in existing fields added another 13.4 trillion cubic feet to the nation's proved recoverable reserves of natural gas. Nearly 516 billion cubic feet of natural gas were added to estimated reserves in underground storage at the end of 1953.

Proved reserves of natural gas and natural gas liquids made substantial gains last year, in spite of increased production. New areas were reached by the nation's pipeline systems and further expansions are contemplated in 1954. The following tabulation of natural gas reserves and production proves that the nation's supply of natural gas is ample to meet all demands for many years to come.

Table 3 is a summary of the committee's annual estimates of proved natural gas reserves for the past nine years, reflecting the changes in the natural gas reserve position in the United States during each of the eight years since December 31, 1945. Table 4 shows the proved natural gas liquids reserves of the United States for the last eight years, and the changes which have taken place in these reserves annually since the first estimate was made as of December 31, 1946.

In order to arrive at an estimate of the total proved liquid hydrocarbon reserves in the United States, the reserves of natural gas liquids shown in Table 2 have been added to the reserves of crude oil estimated by the Committee on Petroleum Reserves of the American Petroleum Institute. The total liquid hydrocarbon reserves are shown in Table 4 of the report of the Committee on Petroleum Reserves.

The committee has continued the practice, begun in the report of December 31, 1948, of reporting the volume of gas in storage in underground reservoirs. Beginning with the current report, underground storage figures are based on data furnished by the Committee on Underground Storage of the American Gas Association. In order to more closely conform to the procedure of that committee, the following change is adopted in this report: in past years, the "stored gas" was considered to be that gas which had been transferred from its original reservoir location in a gas or oil field to another natural underground reservoir for the primary purposes of conservation, fuller utilization of pipeline capacities, and more efficient delivery to markets. Any additional gas remaining in the underground storage reservoir when injection began and which had not been produced was classified and listed, for the most part, as a non-associated natural gas reserve.

Beginning with the current report, that gas which was native to the reservoir at the time storage injection began is included in the underground storage figure, and has been removed from its previous reserve category. Adjustments in, withdrawals from, or additions to storage are included in the figures shown under the heading "Net Change in Underground Storage." Changes in underground storage are excluded from the column headed "Net Gas Production," which is the gross withdrawal less the gas injected into a producing reservoir.

The committee wishes to point out that it is often not possible to estimate the total reserves of a field in the year of its discovery. Satisfactory estimates can be made only after there has been sufficient drilling in the fields and, in some cases, adequate production history established. For these reasons, the reserves listed as discovered during any current year must be considered only as the reserves indicated by the drilling in that year. The estimated reserves of the new fields and pools are revised in each succeeding annual report to show the effect of later developments and are shown as "Extensions and Revisions."

The procedure followed in estimating and assembling the

proved reserve figures is the same as that used in the past reports. A proved reserve may be in either the drilled or undrilled portion of a given field. When the undrilled area is considered proved, it is so related to the developed acreage and the known field geology and structure that its productive ability is considered assured. Proved recoverable reserves of natural gas are those reserves estimated to be producible under present operating practices. Since the estimates are made by pools, the recovery factors or abandonment pressures used in the calculations are governed by the operating conditions in each individual pool. Proved recoverable reserves of natural gas liquids are those contained in the recoverable gas reserves subject to being produced as natural gas liquids by separators or extraction plants, now in operation, under construction or planned for the immediate future. For purposes of developing reserve estimates, natural gas liquids are defined as those hydrocarbon liquids which are gaseous or in solution with crude oil in the reservoir and which are recoverable as liquids by the processes of condensation or absorption which take place in field separators, scrubbers, gasoline plants, or cycling plants. Natural gasoline, condensate, and liquified petroleum gases fall in this category. While the liquids so collected and the products derived from them in some of the modern plants are known by a variety of names, they have been grouped together here under the general heading "Natural Gas Liquids."

The estimates presented in this report incorporate the results of carefully detailed studies of many hundreds of fields and pools throughout the United States. Their preparation has required the help and active cooperation of specially trained geologists and engineers familiar with developments in all producing areas throughout the country.

(Additional charts appear on page 52)

NATURAL GAS

	December 31, 1953	December 31, 1952 (Thousands of cubic feet)	Increase 1953 Over 1952
Reserves, Natural Gas	211,447,132,000	199,716,225,000	11,730,907,000
	1953	**1952**	Increase 1953 Over 1952
Production, Natural Gas	9,238,540,000	8,639,638,000	598,902,000

The production figures for 1953 are net after deducting the amount of gas returned to reservoirs for cycling and pressure maintenance.

LIQUID HYDROCARBON RESERVES

RESERVES	December 31, 1953	December 31, 1952 (Barrels of 42 gallons)	Increase 1953 Over 1952
Crude Oil	28,944,828,000	27,960,554,000	984,274,000
Natural Gas Liquids	5,437,922,000	4,996,651,000	441,271,000
Total Liquid Hydrocarbons	34,382,750,000	32,957,205,000	1,425,545,000
PRODUCTION	**1953**	**1952**	Increase 1953 Over 1952
Crude Oil	2,311,856,000	2,256,765,000	55,091,000
Natural Gas Liquids	302,698,000	284,789,000	17,909,000
Total Liquid Hydrocarbons	2,614,554,000	2,541,554,000	73,000,000

NATURAL GAS RESERVES

		(Thousands of cubic feet)
Total proved reserves as of December 31, 1952		199,716,225,000
Extensions and revisions of previous estimate during the year of 1953	13,371,355,000	
New reserves discovered in 1953	7,081,661,000	
Net changes in "stored gas" during 1953	516,431,000	
Total proved reserves added and net changes in "stored gas" during 1953		20,969,447,000
Total proved reserves as of December 31, 1952 and additions during 1953		220,685,672,000
Deduct production during 1953		9,238,540,000
Total proved reserves of natural gas as of December 31, 1953		211,447,132,000

TABLE 1

ESTIMATED PROVED RECOVERABLE RESERVES OF NATURAL GAS IN THE UNITED STATES

(Millions of Cubic Feet—14.65 psia, at 60 Deg. F)

	Reserves[b] as of Dec. 31, 1952 (1)	Changes in Reserves during 1953: Extensions and Revisions[b] (2)	Discoveries of New Fields and New Pools in Old Fields[b] (3)	Net Change in Underground Storage[c] (4)	Net Production[d] (5)	Reserves[b] as of December 31, 1953: Total (Columns 7 + 8 + 9 + 10, also Columns 1 + 2 + 3 + 4 less Column 5) (6)	Non-Associated[e] (7)	Associated[f] (8)	Dissolved[g] (9)	Underground Storage[h] (10)
Arkansas	984,582	252,566	10,983	2,588	39,453	1,211,266	758,404	162,085	285,563	5,214
California[i]	9,340,022	219,205	50,348	50,717	500,945	9,159,347	2,352,644	2,137,871	4,605,198	63,634
Colorado	1,164,249	542,852	213,313	0	56,139	1,864,275	1,191,520	57,810	614,945	0
Illinois	211,651	48,856	929	0	30,185	231,251	10,001	2,500	218,750	0
Indiana	36,714	215	2,150	3,901	7,150	35,830	3,152	2,700	23,240	6,738
Kansas	14,193,565	466,236	1,587,106	8,457	467,762	15,787,602	15,287,581	139,158	319,669	41,194
Kentucky	1,313,523	42,014	11,160	5,836	71,000	1,301,533	1,226,061	0	56,072	19,400
Louisiana[i]	31,451,614	3,144,349	1,294,440	0	1,431,491	34,458,912	27,505,549	4,508,051	2,445,312	0
Michigan	254,543	(—)83,567	250	110,964	6,671	275,519	34,629	0	46,780	194,110
Mississippi	2,364,060	248,669	156,372	196	200,116	2,569,181	1,947,388	390,302	230,838	653
Montana	827,603	(—)50,924	925	19,493	33,097	764,000	616,312	34,375	84,206	29,107
Nebraska	93,958	87,954	12,300	0	12,102	182,110	148,696	6,646	26,768	0
New Mexico	14,038,889	3,539,961	301,459	78,003	436,102	17,522,210	14,075,903	1,754,422	1,594,172	97,713
New York	68,640	(—)2,688	0	7,414	2,362	71,004	42,452	0	468	28,084
Ohio	731,483	(—)36,247	5,618	86,408	31,280	755,982	497,645	0	33,453	224,884
Oklahoma	11,764,829	875,175	427,602	26,238	865,471	12,228,373	6,882,492	1,782,641	3,488,472	74,768
Pennsylvania	709,585	9,442	75,450	55,673	98,306	751,844	501,751	0	37,171	212,922
Texas[i]	105,732,763	2,591,789	2,868,008	5,466	4,668,400	106,529,626	69,324,826	20,661,008	16,536,493	7,299
Utah	283,412	826,517	12,820	0	9,691	1,113,058	1,108,297	0	4,761	0
West Virginia	1,660,070	88,247	21,850	49,775	166,000	1,653,942	1,428,425	0	59,503	166,014
Wyoming	2,321,124	481,122	23,795	5,302	91,712	2,739,631	1,840,794	349,154	531,695	17,988
Miscellaneous[a]	169,346	79,612	4,783	0	13,105	240,636	65,878	0	174,758	0
Total	199,716,225	13,371,355	7,081,661	516,431	9,238,540	211,447,132	146,850,400	31,988,723	31,418,287	1,189,722

[a] Includes Alabama, Florida, Maryland, Missouri, North Dakota and Virgina.
[b] Excludes gas loss due to natural gas liquids recovery.
[c] The net difference between gas stored in and gas withdrawn from underground storage reservoirs, inclusive of adjustments and native gas transferred from other reserve categories.
[d] Net production equals gross withdrawals less gas injected into producing reservoirs. Changes in underground storage and gas loss due to natural gas liquids recovery are excluded. December production estimated in some instances.
[e] Non-associated gas is free gas not in contact with crude oil in the reservoirs.
[f] Associated gas is free gas in contact with crude oil in the reservoirs.
[g] Dissolved gas is gas in solution with crude oil in the reservoirs.
[h] Gas held in underground reservoirs (including native and net injected gas) for storage purposes.
[i] Includes off-shore reserves.

TABLE 2

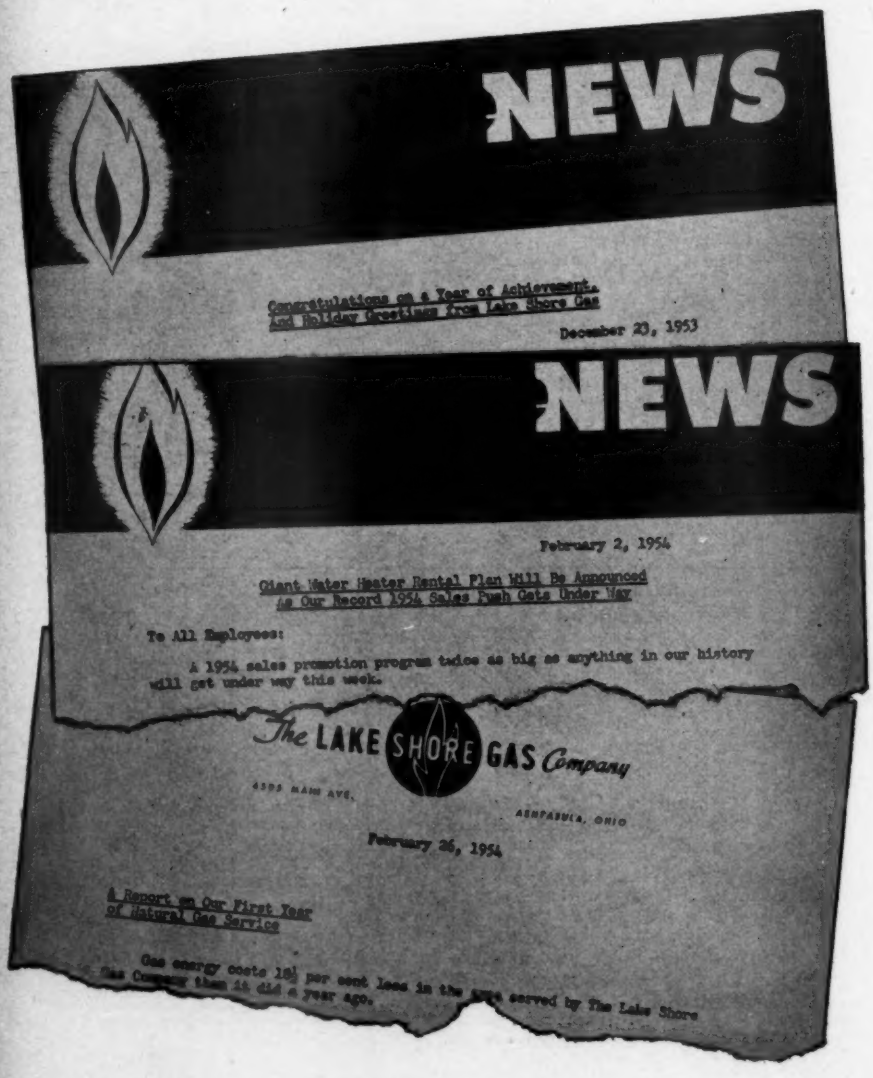
ESTIMATED PROVED RECOVERABLE RESERVES OF NATURAL GAS LIQUIDS IN THE UNITED STATES[a]

(Thousands of Barrels of 42 U. S. Gallons)

	Reserves as of Dec. 31, 1952 (1)	Changes in Reserves during 1953: Extensions and Revisions (2)	Discoveries of New Fields and New Pools in Old Fields (3)	Net Production (4)	Reserves as of December 31, 1953: Total (Columns 6 + 7 + 8, also Columns 1 + 2 + 3 Less Column 4) (5)	Non-Associated (6)	Associated (7)	Dissolved (8)
Arkansas	50,871	1,001	269	2,556	49,585	28,608	6,628	14,349
California[d]	322,507	32,865	308	30,814	324,866	0	105,936	218,930
Colorado	11,339	0	0	650	10,689	287	0	10,402
Illinois	20,246	13	5	3,221	17,043	48	13	16,982
Indiana	169	1	11	36	145	16	13	116
Kansas	168,227	6,099	8,261	4,859	177,728	172,998	1,533	3,197
Kentucky	9,158	307	151	1,840	7,776	7,776[c]	0	0
Louisiana[d]	713,666	128,468	15,859	44,779	813,214	656,039	108,672	48,503
Michigan	583	100	31	73	641	173	0	468
Mississippi	50,931	6,520	577	3,294	54,734	27,957	22,715	4,062
Montana	3,129	0	0	221	2,908	2,908	0	0
Nebraska	2,716	457	62	201	3,034	2,513	367	154
New Mexico	151,543	178,299	1,801	10,986	320,657	212,734	27,618	80,305
Ohio	1,778	(—)417	9	11	1,359	1,359[c]	0	0
Oklahoma	284,906	37,407	9,284	27,365	304,232	105,267	31,581	167,384
Pennsylvania	2,640	180	89	141	2,768	2,768[c]	0	0
Texas	3,125,091	245,556	58,998	162,403	3,267,242	1,447,521	388,062	1,431,659
Utah	57	0	0	4	53	53	0	0
West Virginia	19,528	15,619	207	7,141	28,213	28,213	0	0
Wyoming	57,090	(—)4,430	0	2,101	50,559	32,681	17,878	0
Miscellaneous[b]	476	2	0	2	476	0	0	476
Total	4,996,651	648,047	95,922	302,698	5,437,922	2,729,919	711,016	1,996,987

[a] Includes condensate, natural gasoline and liquefied petroleum gas.
[b] Includes Alabama, Florida and North Dakota.
[c] Not allocated by types but occurring principally in the column shown.
[d] Includes off-shore reserves.

How Lake Shore opened all-out gas offensive



NEWS

Congratulations on a Year of Achievement.
And Holiday Greetings from Lake Shore Gas

December 23, 1953

NEWS

February 2, 1954

Giant Water Heater Rental Plan Will Be Announced
As Our Record 1954 Sales Push Gets Under Way

To All Employees:

A 1954 sales promotion program twice as big as anything in our history will get under way this week.

The LAKE SHORE GAS Company

4303 MAIN AVE. ASHTABULA, OHIO

February 26, 1954

A Report on Our First Year
of Natural Gas Service

Gas energy costs 18½ per cent less in the area served by The Lake Shore Gas Company than it did a year ago.

An intelligent and well-planned promotion and public relations program can solve a great many gas utility problems, and an advertising dollar can often be the customer's best friend.

These facts are being proved by a natural gas company that is writing promotion and public relations history. It is a company that has been able to hold the line on rates by spending $5.75 per meter for promotion and public relations this year, compared with the gas industry average of $2 per meter.[1]

Tucked away in the Northeast corner of Ohio, The Lake Shore Gas Company is actively supporting the Gas Industry Development Program and is overcoming almost fabulous difficulties by one of the most enterprising and ambitious sales programs in the entire gas industry.

The service area of Lake Shore Gas —centered in and around Ashtabula, Conneaut, and Geneva—comprises a population of about 65,000. About 85 percent of the homes are owned by the occupants.

This is a heavily industrialized area, including two of the largest ore receiving ports on the Great Lakes. The area has shown consistent growth since 1938, and is expected to become a major chemical center.

The gas company serves 12,000 domestic customers, 450 commercial customers, 12 large volume industrial users, and 26 regular industrial customers. In addition to solidly backing the Gas Industry Development Program, the company is now a full-fledged participant in the A. G. A. PAR (promotion, advertising, research) Program.

Following up on a tip from Royce A. Hoyle, Jr., A. G. A. field representative, who visited Ashtabula recently, the MONTHLY arranged an interview with Robert H. Willis, vice-president and general manager of Lake Shore Gas. Here, in reply to our questions, is the company's story—as told in Mr. Willis' own words.

Question—When did your company convert to natural gas?

Mr. Willis—About a year ago. We previously had been restricted to an inadequate supply of coke oven gas from a local chemical plant. Our supply of energy is now 15 times greater

[1] Gas industry average from A. G. A. *Gas Facts* 1952.

than before completion of a 75-mile gas transmission line by our sister firm, Lake Shore Pipe Line Company.

Question—Did you have a high saturation of gas appliances in your service area?

Mr. Willis—Just the reverse. Our electrical competitors did an outstanding promotional job during the years when our supply and service were generally inadequate. We had only half of the range and water heating installations. Only 3½ percent of the homes in our area were heated with gas, and only 4½ percent of them had gas refrigerators. Our dryer and incinerator load was virtually non-existent.

Question—Did the situation change sharply with the arrival of natural gas?

Mr. Willis—No. We had done little in the past to earn public support. The coming of natural gas meant a reduction of about ten percent in our rates, but they still were from 50 to 80 percent higher than in nearby communities which had natural gas for many years. This fact was picked up by public officials who castigated every phase of our operations. We had more problems with a ten percent rate cut than most utilities have with a ten percent increase.

Big program under way

Question—What did you do about these problems?

Mr. Willis—Our first job was to improve our service. We enlarged our service force, added to our automotive equipment, put servicemen and meter readers in uniform, and improved the quality of our program of free services. Standards for appliance installations were strengthened, and we began inspecting all heating and water heating installations, adjusting combustion efficiency when necessary. We then began an $825,000 growth and improvement program, now half-completed, and this assured uniform pressures and adequate service.

Question—How about your public relations?

Mr. Willis—We tried a unique program of making a complete report of our progress and problems every few months to municipal officials and community leaders. Our earnings and expenses were explained in detail. We

RIDE THE BARGAIN TRAIN WITH Gas
Hook up all your appliances to Gas and
SAVE! SAVE! SAVE!
GAS IS BEST!
"Let Gas pull the whole load and you'll save on fuel bills"
For A Real Buy in Better Living
See Your
Gas Dealer or
The LAKE SHORE Gas Company
Bringing You NATURAL GAS — Nature's Miracle for BETTER LIVING
RENTAL
ater Heaters
ushed by
RLOAD!
CALL YOUR DEALER OR THE COMPANY TODAY, TO RESERVE YOUR GAS WATER HEATER. ENJOY THE BENEFITS OF AN OUTSTANDING QUALITY HEATER FOR A RENTAL OF JUST $1.75 A MONTH. WHEN YOU HEAT YOUR WATER WITH GAS, YOU ARE USING THE WORLD'S FASTEST AND MOST ECONOMICAL FULLY AUTOMATIC FUEL.
The LAKE SHORE Gas Company
Bringing You NATURAL GAS — Nature's Miracle for BETTER LIVING

Samples of hard-hitting newspaper advertisements stressing Lake Shore's free appliance servicing policy and its novel water heater rental program

Modern sales floor in Lake Shore Gas Company's Ashtabula office showing gas ranges and display of rental gas water heaters. The water heater plan has been so popular that the gas company was swamped with rental agreements during the first two weeks

R. H. Willis (right), vice-president and general manager, The Lake Shore Gas Co., tells in the accompanying interview how his company is building a sound community and public relations program. Special "Reports to Municipalities", employee newsletters and a new dealer cooperative program are strengthening the utility's position locally

stressed in this frequent "Report to Municipalities" the fact that growth in load was the only way to lower rates. Then we followed up the "Report" by personal meetings with the officials of each municipality we serve.

Question—Did this work?

Mr. Willis—We found the officials willing to listen to our economic story. Once they understood the facts, we found them truly cooperative. Gas rates are no longer a political football.

Question—What was the public's reaction?

Mr. Willis—We told the story of our improved service by newspaper, radio, direct mail, and word of mouth. We also provided the newspapers with complete economic facts, and presented figures proving gas to be a highly competitive buy in better living. Incidentally, we made a special effort to keep employees informed of our activities by letter and by informal talks at employee meetings.

Then the new problem

Question—What is your most urgent problem today?

Mr. Willis—Building load to overcome rising costs. We have faced three substantial increases in the cost of the gas we buy. Our payroll is up from 70 to 104 employees, and individual wage rates have increased. Our load building is complicated by the start that the electric competition has made due to aggressive promotion and by the fact that our rates must of necessity be higher than those in nearby areas, although they are lower than in other areas just converted to natural gas. Our biggest single problem is to encourage public acceptance of gas cooking, water heating and home heating as the only acceptable modern methods.

Question—Has conversion to natural gas improved your company's situation?

Mr. Willis—The root causes of our difficulties remain. However, an adequate supply of gas now gives us room to grow, and we have enjoyed substantial improvement on the surface because we have added heating and industrial load. Our sales were 88 percent greater last year than in 1952, and our construction program has provided better service than ever was possible before. However, we must grow even more rapidly to overcome rising expenses and earn an adequate profit.

Support of industry program

Question—How is The Lake Shore Gas Company supporting the Gas Industry Development Program?

Mr. Willis—Failure to perform many of the specific jobs outlined in the Development Program has caused most of our problems over the last 20 years, and we have now adopted all 15 points of the Gas Industry Development Program.

We have inaugurated an aggressive dealer program and expanded our sales force to one man for every 1200 customers, compared with one for every 6400 in the gas industry nationally,[2] and we are making a special effort to build business for dealers.

We have organized a contractors' liaison department and are working with appliance distributors. Our sales promotion program is backed by over $5 per meter, and we are offering gas load bonuses to dealer salesmen for selling upgraded appliances.

[2] Industry average based on recent A. G. A. survey.

A cooperative program with dealers and banks for gas company collection of appliance installment payments was started on February 1, and exclusive franchises were discontinued on the same date. Meetings and correspondence to improve relations with appliance makers are now under way.

Improved main extension policies have been introduced, and a new peak-shaving plant program is in effect. Newspaper and direct mail advertising is being emphasized, and new liberal free service and inspection policies are in effect. Training schools for dealer salesmen and our own service crews are scheduled for this year.

Question—Have you added any developments of your own to the program?

Mr. Willis—We should learn something from our electric brothers who have done a much better promotion job than the gas industry. We are, as a matter of policy, making sure that our service is good before we talk about it. And we are recognizing that both good service and adequate advertising of it must be considered as a vital part of normal operating expenses, because sale of the appliances best operated by gas is the only road to the full use of our facilities that will maintain rates at the lowest possible levels.

Promotion objectives

Question—What are the objectives of your expanded promotion and advertising program?

Mr. Willis—We are trying primarily to build acceptance of gas by making everyone in our area conscious of all the benefits of gas as a basic energy source, by up-grading appliances, by holding the line on rates through increased sales, by doubling our sales force, and by building dealer cooperation to saturate the market wherever gas appliances can do a better job.

Question—Your subscription to the industry's PAR program will cost you less than 13 cents a meter for promotion, advertising and research in 1954. How do you expect to benefit?

Mr. Willis—All of our local advertising is coordinated with the A. G. A. time schedule. We are well aware that national advertising by GAMA and A. G. A. is an effective base on which

(Continued on page 50)

By '58—59 million appliance sales?

TABLE 1

HISTORICAL SALES AND POTENTIAL FUTURE SALES OF GAS APPLIANCES[a]

	Past Sales		Potentials			
			Current Economic Levels[b]		Lower Economic Levels[c]	
	1952	1948-52	1954	1954-58	1954	1954-58
Ranges	2,175,000	12,418,000	3,150,000	19,300,000	2,550,000	12,700,000
Water Heaters	1,910,000[d]	9,176,000[d]	2,600,000	18,000,000	2,150,000	12,400,000
Central Htg. Units[e]	1,185,000	5,575,000	1,300,000	7,800,000	1,000,000	4,600,000
Space Heaters	1,710,000	9,155,000	2,000,000	13,700,000	1,450,000	7,900,000
Driers	135,000	Not Available	225,000	Not Computed	200,000	Not Computed
Incinerators	Not Available		200,000	Not Computed	160,000	Not Computed
TOTAL	7,115,000	36,324,000	9,475,000	58,800,000	7,510,000	37,600,000

[a] Excluding gas refrigerators and all-year air conditioning.
[b] Assuming no change from the 1953 level of consumer disposable income.
[c] Assuming a ten percent decline in 1954, and twenty percent in 1954-58, in consumer disposable income.
[d] Automatic water heaters only.
[e] Including floor and wall furnaces.

Nearly 59 million gas ranges, water heaters, and heating units can be sold during 1954-58 if economic conditions remain at current levels. A decline in consumer incomes, equivalent to ten percent during 1954 and 20 percent during the five-year period, would cause a reduction of 36 percent in the economically attainable potential for these appliances to 37.6 million units. Actual sales during 1948-1952, when the backlog of demand created by war-imposed scarcities was being satisfied, were 36.3 million, as outlined below for comparative purposes.

These sales potentials were developed by the Bureau of Statistics of A. G. A. as one phase of the Gas Industry Development Program, and in accordance with the tenet of the "action program" relating to the availability of factual information on the market for gas appliances. The study was guided by the Marketing Research Subcommittee of the A. G. A. Committee on Economics, and the results were approved by both groups for general industry release.

Potential gas range sales for 1954 total 3.15 million units, while for the five-year period the aggregate is 19.3 million. Range potentials for the entire period show a higher annual average than for 1954 because of the gradual improvement which can be effectuated in consumer acceptance of gas by increases in promotion and product design activity; the effectiveness of such activities upon the public is cumulative. The potentials would be larger but for probable declines in new housing during 1954-58 and the lower level of needed replacements attributable to the reduced level of sales during the war years; production during these years would become eligible for replacement during the period. It is evident that potentials will exceed actual sales in recent years by 60 percent if present economic levels continue. If business activity declines, range potentials will approximate 12.7 million and 2.55 million for the forthcoming five-year period, and for 1954, respectively. Under such circumstances, it would be necessary to exert additional efforts to maintain the rate of sales currently achieved without such incremental efforts. Naturally, the same external factors will be operative in depressing sales of electric ranges.

Potential gas water heater sales during the period are estimated at 18.0 million, with 2.6 million for 1954 alone. Reductions in business activity would depress these potentials to 12.4 million and 2.15 million, respectively. Actual sales during 1948-1952 are estimated at 10.0 million (both automatic and side-arm). During the five-year period, between 3.6 and 5.3 million dwellings represent potential conversions from a competitive fuel to gas water heating thus tending to lessen the impact of probable declines in housing activity.

Gas space heater potential sales during 1954-1958 are 13.7 million units while

the gas-fired central heating potential is 7.8 million. Lower business activity would limit these potentials to 7.9 million and 4.6 million, respectively. Thus, an increase of 40-50 percent in heating sales appears achievable. Conversions from coal and wood as well as oil occurred so rapidly in many areas during postwar years that much of this market is already using gas. However, the remaining conversion market is still large enough to affect potentials to a marked, but lesser, extent. Conversions are particularly vulnerable to business declines, since the discarded unit is frequently usable but undesirable. Competitive fuel prices may be more responsive to possible economic declines than gas prices, thus reducing the current favorable price relationships enjoyed by gas in most areas.

Potential sales of gas dryers during 1954 vary between 200,000 and 225,000 while incinerator potentials range from 160,000 to 200,000. These newer appliances may be affected more severely by a downturn in business activity although the ultimate long-term potential is high compared to current sales levels.

Appliance sales potentials are of inestimable value to both manufacturers and utilities in facilitating the development of managerial decisions within a quantitative framework. Even though some estimating is necessary, they provide a reasonable basis for planning. Potentials aid in the objective evaluation of sales by comparing attained performance with results achievable if a maximum of promotional and product development effort has been expended. The exact amount and type of effort will vary for different companies; "maximum" is intended to equal the limit justifiable by good business judgment, based on long-term considerations, and should not exceed the point at which incremental expenditures outweigh the foreseeable benefits. All potentials contained in this study relate to sales regarded as realistically and economically achievable within the period covered. They do not represent ultimate potentials realizable in the distant future, by excessive effort only.

Potentials also indicate the relative extent of unfulfilled markets in certain portions of the economy, thereby orienting sales promotion efforts. They facilitate decisions on future plant expansion and associated financing, as well as estimates of future profitability.

Fluctuations in industrial activity, personal income and the business cycle affect the magnitude of potentials. Estimates have been prepared on two bases: (a) disposable personal income will continue at the same level as 1953, and (b) a reduction of ten percent in disposable income during 1954, and an average decline for 1954-1958 of 20 percent, will occur. Some reduction is anticipated by most economic forecasters in business and government, although few predict declines as significant as those specified above. The preparation of potentials predicated upon the conceivable upper and lower limits of business activity permits the approximate determination for any intermediate level, and illustrate more graphically the impact of economic conditions. Declines in new family formation make it probable that housing activity will be smaller; this will adversely affect demand for appliances and other consumer durable items.

The reliability of sales potential analyses increases as more accurate basic statistics are compiled, more definitive mathematical techniques are evolved, more realistic appraisals of the economic limits of increased promotional and product design activity become possible, and the relationships between potentials and general levels of business activity become more apparent. It is anticipated that this first study will be succeeded by new estimates annually, and that future studies will segregate potentials by geographic area and compute data separately for major sub-divisions of appliance categories. Additional details concerning potentials, including the segregation between new housing, replacement of gas units, and conversions from other fuels, will be supplied upon request.

Westerners take coats off to join industry action plans

MEMBERS OF THE PACIFIC Coast Gas Association rolled up their shirt sleeves and got down to work recently to decide the best way the Pacific Coast companies can tie-in with American Gas Association's Action Program for the Gas Industry.

Principal western companies sent sales executive representatives to a Gas Sales Clinic in San Francisco, January 26-28. The representatives decided that the PCGA should urge its members to take every advantage of the coordination and materials offered by A. G. A. The A. G. A. efforts will be supplemented from time to time by special local action.

The clinic included meetings of all the working committees of the western association's Sales and Advertising Section and the annual Home Service Workshop. Murray S. Holloway, Jr., supervisor, domestic sales, San Diego Gas and Electric Co., is chairman of the section. Other Pacific Coast leaders who led the shirt sleeve meetings were C. R. Hayden, Coast Counties Gas and Electric Co., sponsor for non-residential sales; P. R. Shea, Southern California Gas Co., sponsor for residential sales; and Mrs. Maxine Gentis, Pacific Gas and Electric Co., sponsor for home service.

Maury Breslow, executive vice-president, Utility Appliance Corp., addresses a shirt sleeve session during PCGA's recent three-day Gas Sales Clinic for industry development in San Francisco. P. R. Shea, Southern California Gas Co., sponsor of Residential Sales Group, presides at far end of table

Storage up 35 percent over 1952

Tremendous growth in the use of natural gas for house heating has been accommodated by constantly expanding natural gas underground storage capacity—the ultimate capacity of existing pools having been increased by 1,190 percent in the past decade.

Vast underground reservoirs which store up natural gas injected in warm weather to be withdrawn for winter use have been expanded from 135 billion cubic feet estimated total ultimate capacity in 1944 to approximately 1.7 trillion cubic feet last year.

These figures are presented in a report for 1953 issued by the A. G. A. Underground Storage Committee, headed by John V. Goodman, general superintendent of production and chief system geologist, Equitable Gas Co., Pittsburgh. Information was compiled by the group's Subcommittee on Statistics, headed by John B. Corrin, Jr., superintendent of gas storage, Hope Natural Gas Co., Clarksburg, W. Va.

Ultimate capacity of existing storage pools increased by 35 percent, from 1.29 trillion cubic feet in 1952 to 1.74 trillion cubic feet in 1953. New pools currently under construction will have an additional ultimate capacity of 315 billion cubic feet of natural gas. By the end of last year there were 167 underground natural gas storage pools operating in 17 states, compared with 50 pools in 11 states during 1944, the report shows.

Input to underground storage for

GROWTH OF UNDERGROUND STORAGE IN UNITED STATES

Year	No. Pools	No. States	Est. Total Reservoir Capacity (Cubic Feet)
1944 (a)	50	11	135 Billion
1947 (b)	70	11	250 Billion
1949 (c)	80	11	497 Billion
1950	125	15	774 Billion
1951	142	15	916 Billion
1952	151	16	1,290 Billion
1953	167	17	1,735 Billion

Sources:

(a) E. G. Dahlgren—A.P.I. Eastern District Meeting, Columbus, Ohio.
(b) E. G. Dahlgren—A.G.A. Natural Gas Department, Chicago, Illinois.
(c) Max W. Ball—A.G.A. Natural Gas Department, French Lick, Indiana.

SUMMARY OF PERTINENT DATA CONTAINED IN REPORT 1951-1953

	1951	1952	1953
Number of States	15	16	17
Number of Companies	32	35	37
Number of Pools	142	151	167
Number of Active Wells	4,384	4,940	5,789
Number of Compressing Stations	96	97	102
Total Horsepower of Compressing Stations	211,480	248,864	271,437
Maximum Gas in Storage—MCF	546,720,275	777,003,396	889,137,531
Gas in Storage as of October 31—MCF	Not Available	749,487,290	883,504,723
Input to Storage for Year Ending October 31—MCF	337,744,845	374,119,570	403,304,107
Output from Storage for Year Ending October 31—MCF	200,434,703	234,792,261	232,558,971
Maximum Day Output for Year Ending October 31—MCF	3,240,626	4,101,207	4,213,381
Ultimate Reservoir Capacity—MCF	915,988,520	1,292,321,020	1,735,815,180
Number of New Pools Under Construction	8	17	12
Estimated Ultimate Capacity of New Pools—MCF	136,526,009	281,497,780	314,579,000

TOTAL COMPRESSING STATIONS AVAILABLE FOR UNDERGROUND STORAGE OPERATIONS

Input Only	21	21	22
Both Input and Output	63	66	68
Output Only	12	10	12
Total	96	97	102

Charts from 1953 Report of the Subcommittee on Statistics of the A. G. A. Underground Storage Committee.

TERMS USED IN UNDERGROUND GAS STORAGE OPERATIONS

Compiled by
A. G. A. Committee on Underground Storage

CURRENT GAS—The total volume of extraneous gas injected into a storage reservoir in excess of the total *cushion* gas. This is the total maximum volume of gas available for delivery during any input-output cycle.

CUSHION GAS—The total volume of economically recoverable, *native* gas or *foreign* gas which exerts a pressure, within the storage reservoir, from 0 psi gauge pressure to the pressure in a storage reservoir which will maintain a required minimum rate of delivery during any output cycle.

CUSHION GAS, CAPITALIZED OR FOREIGN—That part of the volume of injected *cushion* gas which is extraneous to the storage reservoir.

CUSHION GAS—NATIVE—That part of the volume of *cushion* gas which is indigenous to the storage reservoir.

DELIVERABILITY—The output of gas from a storage reservoir, expressed as a rate in Mcf per 24 hours, at a given total volume of gas in storage with a corresponding RP, and at a given flowing pressure at the well head.

FOREIGN GAS—The volume of extraneous gas injected to the storage reservoir which exerts, within the storage reservoir, a gauge pressure above that gauge pressure (psi) at which storage was started.

HORIZON, STORAGE—The drillers' name of that stratum of the earth's crust within which the storage reservoir is located.

INJECTABILITY—The input of gas to a storage reservoir, expressed as a rate in Mcf per 24 hours at a given total volume of gas in storage with a corresponding RP, and at a given flowing pressure at the well head.

INPUT, TOTAL—Volume of *foreign* or extraneous gas injected to a storage reservoir during a given period of time.

MAXIMUM GAS IN STORAGE—The total highest volumetric balance of total input over total output of gas in storage.

NATIVE GAS—The volume of gas indigenous to the storage reservoir. This should include the total volume of unrecoverable gas and economically recoverable gas within the storage reservoir, which exert a pressure from 0 psi gauge pressure to the gauge pressure (psi) at which gas storage is started.

OUTPUT, TOTAL—Volume of gas withdrawn from a storage reservoir during a given period of time.

PRESSURE—ULTIMATE RESERVOIR—The maximum gauge pressure (either well head or bottom hole as designated) exerted by the volume of gas at the ultimate reservoir capacity expressed in psi gauge pressure.

RESERVOIR, STORAGE—That part of a storage horizon having a defined limit of porosity which can effectively be used to retain gas at a given ultimate reservoir pressure.

ULTIMATE RESERVOIR CAPACITY—The total volume of gas within a reservoir which exerts a pressure from 0 psi gauge pressure to the maximum or ultimate reservoir gauge pressure (psi). This should include all gas of the following classifications: *native* gas (recoverable and unrecoverable), *cushion* gas and *current* gas.

WELL, GAS STORAGE—A bore hole extending from the surface into the storage reservoir, which is used primarily for either the input or output of gas or for observation of pressure, or the extraction or injection of fluids in connection with a gas storage project.

the year ended October 31, 1953 was 403 billion cubic feet of natural gas, compared with output from storage of 233 billion cubic feet for the same period. Larger backlogs of natural gas for future use were built up by injecting greater amounts of natural gas underground in warm weather than were withdrawn during cold weather. Natural gas taken from storage underground was minimized because of the relatively mild 1952-53 winter.

Ultimate capacity of existing natural gas reservoirs last year comprised three main categories. Most of this capacity, 982 billion cubic feet, was working gas which constituted the total maximum gas available for immediate use. Next came 496 billion cubic feet of cushion gas, which boosts pressure from underground storage through spring-action resembling the "push" for a jack-in-the-box when its lid is popped open. Finally, there were 260 billion cubic feet of native gas which had been left in original natural gas wells after they had ceased being economically productive and before they were used for storage.

More active wells

The survey shows that 37 companies conducted underground storage operations in 1953, compared with 35 in 1952. The number of active wells, from which stored natural gas was withdrawn, increased in number from 4,940 to 5,789 last year. These wells are grouped into storage pools. Principal geographic distribution of storage pools is 55 in Pennsylvania; 28 in West Virginia; 14 each in New York and Kansas; 12 in Michigan; 11 in Ohio, plus 33 other pools in 11 states. Of these 167 pools in 17 states, 155 originally were dry gas reservoirs; eight combined oil and gas; one oil, and three water.

The Committee has been hampered somewhat in its work because of confusion caused by lack of uniform nomenclature in underground storage operations. To offset this, it has compiled a list of terms used in these operations and has prepared definitions of each, which appear to the left of this page.

The Committee hopes that these definitions will be accepted by, and become standard in, the industry. Copies of the Statistical Report and the definitions may be obtained from the Operating Section.

Facts and Figures

Prepared by A. G. A. Bureau of Statistics

February shipments of gas ranges and water heaters were down 21.1 percent and 6.8 percent respectively, when compared with the same month a year ago. This continued decline in shipments is not symptomatic of gas appliance manufacturers alone but appears to have affected all major durable goods industries in the nation.

The Federal Reserve Board Index of Industrial Production has for the eighth consecutive month indicated a decline in industrial activity with the current level being 8.2 percent below that of a year ago. Significantly, the rate of decline gives indications of slackening. A further encouraging omen is the slight increase in housing starts during February when compared to the same month of 1953. With the outlook for new housing starts being somewhat more optimistic than estimates made several months ago, it appears probable that gas appliance shipments will improve later this year.

Appliance data relate to manufacturers' shipments of the entire industry compiled by the Gas Appliance Manufacturers Association. Industrywide electric appliance statistics are based on data compiled by the National Electric Manufacturers Association, and are reprinted by GAMA in their releases.

Total revenues of the gas utility and pipeline industry to ultimate consumers in the fourth quarter of 1953 aggregated $706 million. This was 5.3 percent higher than in the like quarter a year ago. There were 26.8 million gas customers and approximately 300,000 liquefied petroleum gas utility customers being served at December 31.

Gas utility and pipeline sales during January totaled 6,556 million therms. This represents a new monthly peak and is equivalent to a gain of 8.3 percent over the comparable month one year earlier. National average degree-day deficiencies during January were approximately 15.4 percent greater than in January 1953.

SALES OF GAS AND ELECTRIC RESIDENTIAL APPLIANCES

(WITH PERCENT CHANGES FROM THE CORRESPONDING PERIOD OF THE PRIOR YEAR.)

	February 1954		January 1954	
	Units	Percent Changes	Units	Percent Changes
RANGES				
Gas	146,600	—21.1	138,600	—18.1
Electric	n.a.	n.a.	116,400	— 6.7
WATER HEATERS				
Gas	175,700	— 6.8	164,400	—10.7
Electric	n.a.	n.a.	53,900	—13.5
GAS HEATING				
Furnaces	31,300	+ 5.0	26,900	—13.5
Boilers	2,900	—24.3	2,900	+ 7.4
Conversion Burners	7,700	0.0	9,000	— 7.2

GAS SALES TO ULTIMATE CONSUMERS BY UTILITIES AND PIPELINES

(MILLIONS OF THERMS)

	1954	1953	Percent Changes
January			
All types of gas	6,556	6,055	+8.3
Natural gas	6,161	5,683	+8.4
Other gases	395	372	+6.0
Twelve Months Ending January 31, 1954			
All types of gas	56,595	53,156	+6.5
Natural gas	53,366	49,853	+7.0
Other gases	3,229	3,303	—2.2

CUSTOMERS, SALES AND REVENUES OF U.S. GAS UTILITIES AND PIPELINES—FOURTH QUARTER, 1953

	Quarter ending December 31			Twelve months ending December 31		
	1953	1952	Percent Change	1953	1952	Percent Change
CUSTOMERS						
Total	26,779,400	26,064,000	+ 2.7			
Residential	24,670,900	24,032,000	+ 2.7			
Commercial	1,974,900	1,902,000	+ 3.8			
Industrial	107,900	105,000	+ 2.8			
Other	25,700	25,000	—			
SALES IN M THERMS						
Total	14,858,200	14,397,100	+ 3.2	56,662,700	52,619,700	+ 7.7
Residential	4,483,700	4,667,200	— 3.9	17,679,800	17,292,400	+ 2.2
Commercial	1,290,500	1,324,400	— 2.6	4,987,600	4,904,200	+ 1.7
Industrial	8,109,900	7,462,600	+ 8.7	31,136,400	27,986,100	+11.3
Other	974,100	942,900	—	2,858,900	2,437,000	—
REVENUES						
Total	$705,698,000	$670,210,000	+ 5.3	$2,697,040,000	$2,446,155,000	+10.3
Residential	401,930,000	389,582,000	+ 3.2	1,549,716,000	1,441,380,000	+ 7.5
Commercial	87,481,000	85,247,000	+ 2.6	337,419,000	316,257,000	+ 6.7
Industrial	198,308,000	178,419,000	+11.1	751,802,000	638,589,000	+17.7
Other	17,979,000	16,962,000	—	58,103,000	49,929,000	—

What are the facts? How much progress has been made in forging a truly modern gas industry and what are some of the major steps that remain to be accomplished?

Keep the accent on action

By EARL H. EACKER

President, American Gas Association
President, Boston Consolidated Gas Co., Boston, Mass.

"The Gas Industry Development Program started in 1953 but did not end in that year. It remains a living credo which is expected to gain full acceptance in 1954—the year of action!"

It has been said that the gas industry stands on the threshold of a bright new era. I hope to convince you that the gas industry already has entered that new era—an era whose horizons are limited only by the range of our vision and the extent of our united action.

What are the facts?

The gas giant is continuing its miraculous growth. Today, our industry with more than 27 million customers (excluding LP-Gas customers) is the sixth largest in the nation. Approximately 12 billion dollars are invested in gas industry plant and facilities. Gas, which in 1920 provided only 3.9 percent of the energy consumed in the United States, now supplies almost one-quarter. More than 1,200 individual utilities are working at the task of keeping the public supplied with efficient gas fuel, gas appliances and gas service.

The law of action and reaction applies, even in business. Consequently, the gas industry's dramatic progress in the postwar period has been accompanied by a host of problems of increasing complexity. Competition, headed by large firms such as Westinghouse, General Electric and Hotpoint, has thrown enormous funds into the battle to capture our markets. There is a crying need for a complete realization of the problems facing our industry. We must not let operating problems, even as important as rate adjustments to offset increased operating costs, detract from essential programs and future program planning. Over-emphasis on lower priced appliances is a danger signal.

Frank Smith, my friend and predecessor at A. G. A., took occasion early last year to state the issue in its simplest terms.

"We must sell," he declared, "or shrivel!"

This is a basic truth with which I am in complete agreement!

But are we selling?

If I had been asked that question a year ago, I would have had to give a negative answer. No, we were not selling. Many of us were content merely to maintain our markets at that time. All too often we were ignoring the obvious danger signals. The tremendous popularity of gas heating and the Cinderella growth of gas pipeline networks blurred our awareness of the facts.

Nevertheless, there were among us some farseeing men who read the signs correctly. Early last year, their voices were heard.

You are all familiar with the result of their findings. We call it the Gas Industry Development Program, a tenet of faith and good practice. I think of it as a crusade for a dedicated gas industry.

Formulated by two coordinating committees of executives from A. G. A. and GAMA, the Gas Industry Development Program is a series of recommended principles and policies for local application by gas companies throughout the country. It was designed to accomplish four major objectives:

Presented during the annual meeting of New England Gas Association in Boston, Mass., March 25 and 26, 1954.

(1) to broaden and improve gas industry use of scientific marketing techniques; (2) to spur improved customer and public safety; (3) to upgrade gas appliance servicing policies, and (4) to develop an improved program of utilization research.

The final 15-point "Action Program" was approved last Spring by the boards of directors of both A. G. A. and GAMA. Since that time it has been adopted in full or in part by more than 90 percent of the executives of member companies throughout the country.

The basic spirit of this Action Program is exemplified by the first of the 15 points:

"Each operating company member of A. G. A. will assume responsibility for developing an adequate volume of gas appliances in its territory, either through direct merchandising or through dealer promotion, or both. This will necessitate a determination of the potential market for gas appliances in the areas which it (the gas company) serves, including both the replacement market and the new customer market. In many cases it will also necessitate the rebuilding of company merchandising forces and/or the redirection of dealer-cooperative efforts."

That certainly is quite a mouthful! Briefly, it means that the gas company will institute scientific marketing studies and will upgrade its entire sales program.

Easy to accomplish? No!

Necessary? Yes!

There are three major phases to the Action Program. First requirement was to bring the program and its basic principles to the attention of gas industry executives. The response from this approach demonstrated the soundness of the 15 Action Principles. But it also indicated that these policies were not being implemented adequately at the local level as evidenced by unfavorable competitive developments.

The second phase of the Gas Industry Development Program consisted of eight regional Clinics for Sales, Marketing and Operating executives of gas companies. These clinics were held last July and September and were designed to explain the nature of the Action Program to those executives on the firing line who are responsible for company sales activities. Simultaneously, the clinics served as an invaluable forum for interchange of ideas and practices for making individual company efforts as effective as possible.

ACTION IN MONTREAL: President Eacker of A. G. A. discussing the Association's advertising program and achievements with conferees to the New England regional conference of Public Utilities Advertising Association in Canada earlier this year

Many highly favorable comments on these clinics were received from the New England area.

We are now in the third phase of the Gas Industry Development Program. Ten utilities in different parts of the country have been selected for demonstration purposes.

These companies have designated ten medium-size communities they serve as experimental areas in which to demonstrate and study the intense application of the 15 recommended policies. As the initial step, each company has undertaken a market survey to determine the present pattern of gas and competitive appliance usage, as well as consumer attitudes toward that company's service, gas appliances and future purchasing plans. Most of these studies have now been completed, and the companies are beginning their intensified sales efforts. The results of these activities will be studied carefully and at a future date, findings will be released for the guidance of other companies.

- "Other utilities should not and **are not waiting** for the results [from the 'Action Demonstration' cities] before intensifying their own efforts."

It is important to remember, however, that this "Action Demonstration" series is only one phase of the Gas Industry Development Program. Other utilities should not and *are not waiting* for the results of these experiments before intensifying their own efforts.

How many of us remember the unique "Coats Off for Action" luncheon at the A. G. A. Convention last October? That "banquet of ideas" was one of the most inspiring gatherings I have ever attended.

Do you remember the question that Lyle Harvey posed to that hushed gathering? It bears repeating at this time.

"Can we manufacturers and utilities; salesmen, sales managers and presidents; can we in this industry unite on the programs that have been established in so dedicated a fashion that *we* cannot wait for daylight?"

The answer—a strong, affirmative answer—was provided in Cleveland in January of this year. I refer to the three-day demonstration of A. G. A. research-developed gas range units.

What we saw in Cleveland in January was, in reality, the gas industry's new secret weapon. It was the first concrete example of a marriage between the Gas Industry Development Program and the Promotion, Advertising and Research Program to improve the competitive position of the gas industry. The Cleveland gas range unit demonstrations were a signal victory for the forces of action and progress in the gas industry.

Approximately 120 top executives of gas utilities and some 60 representatives of manufacturers of gas ranges and accessories viewed demonstration units designed to make gas ranges superior in these seven respects:

(1) Cool ranges for cooler kitchens.
(2) Instantaneous ignition or re-ig-

nition of top burners at any input rate.

(3) Unsurpassed heating speeds plus high efficiency.

(4) Greater cleanability.

(5) Precision control of the 1,000 heats possible with gas top burners plus very low turn-down heats.

(6) A fast, large area, golden glow broiler, and

(7) Positive elimination of explosion hazards in a precision controlled oven.

Together, these research-developed principles mean that a vastly improved gas range, superior to anything competition can offer, now a practical possibility.

What I saw and heard in Cleveland gave me the greatest thrill I have had in a long time. I enthusiastically believe that these developments give the gas industry the greatest opportunities it has had in years.

The Cleveland demonstrations were a direct application of an Action Program point that calls for a speed up in upgrading of gas appliances by expediting those research projects which show greatest promise, and by constructing demonstration units whenever substantial improvement is indicated.

In view of the many favorable comments expressed in Cleveland, A. G. A. will adopt this same cooperative approach to other fields.

I am convinced that joint projects of this type, sponsored by both the Gas Industry Development and PAR Programs and with the support of utilities and manufacturers, are the best guarantee of a healthy, united gas industry.

I urge you to contact your manufacturer representatives and to throw your full support behind the A. G. A. program to speed up the production of improved gas appliances.

I have mentioned the Cleveland range unit demonstrations as an example of the new crusading spirit that is abroad in the gas industry. What other steps are we taking to protect, enlarge our markets?

Let us take a brief look at some of the accomplishments of the PAR Program.

For more than nine years the PAR Program has exerted an ever stronger unifying force on the various sections of the gas industry. PAR is, in truth, the gas industry's Common Front. It is true that today in many fields competition is hard on our heels; it is conceivable that without PAR that position would have been reversed.

The A. G. A. Board of Directors has approved for 1954 a PAR Program providing $2,460,000 for total gas utility activities. An additional $230,000 for gas pipeline research raise the figure to a total PAR quota of $2,690,000 for gas industry promotion, advertising and research leadership this year. The entire PAR Program has been closely tied in with Gas Industry Development.

Five basic promotional activities are conducted by your national association under PAR. These include: (1) representing member companies at the national level; (2) mass national pre-selling of gas and gas appliances; (3) coordinating all gas industry promotion and sales efforts; (4) working with utilities at the local level, and (5) making long-range preparations for the future.

Five promotional field men were assigned last year to visit utilities in all regions of the country. They have been markedly successful in acquainting mem-

(Continued on page 28)

Columbia backs range developments

a PAR activity

A top official of one of the nation's largest gas systems has taken a dramatic step in direct support of the new gas range principles developed by the American Gas Association Laboratories under the gas industry's PAR Program. (The full story of these principles and their initial showing was reported in "Research Unveils New Range Units", A. G. A. MONTHLY, February 1954, p. 4.)

Following is the text of the special letter which George S. Young, president, The Columbia Gas System, Inc., sent last month to presidents of all gas range manufacturers in Columbia's service area.

"The recent showing in Cleveland, Ohio of developments by the American Gas Association for improving domestic gas ranges was closely examined by our organization. We have studied and discussed the suggested improvements which include:

(1) New design top section burners
(2) New design low input pilots
(3) New design top burner valves
(4) New "Muffle-Type" oven
(5) New luminous flame broiler burner.

"We are sure that you and your organization have also studied these progressive developments. We are enthusiastic about them and we are told that the entire gas industry is intensely interested. We feel the new ideas, and variations of them, should be applied in range manufacturers' laboratories such as yours at the earliest possible moment. We encourage you to expand on these excellent accomplishments of the A. G. A. laboratories in order that the final developments will soon appear on new model gas ranges. It seems to me that the gas range industry now has available definite and far-reaching accomplishments in research.

"Be assured that our entire business promotion department will actively assist you in the marketing of new and improved gas ranges. Our facilities make it possible to:

(1) Advertise by brand name using: Newspapers, Radio, Television.

(2) Utilize over fifty dealer contact men to assist dealers in promoting the sale of gas ranges.

(3) Conduct dealer and consumer demonstrations utilizing a home service staff of over ninety home economists.

(4) Assist in arranging and conducting dealer product training meetings.

(5) Execute direct mail campaigns.

(6) Promote through cooking schools —both traveling and in dealer stores.

(7) Display on 158 display floors in our offices throughout the Columbia Gas System.

"There are many other ways in which we and the entire gas industry can and will assist you in order to protect and expand our all-important cooking load.

"We are interested in knowing your plans in regard to testing and expanding the A. G. A. developments. Will you please advise us so that we can coordinate our activities in order to promote our mutual progress."

A. G. A. member companies are urged to take every possible step to spur the development of vastly improved gas ranges that will strengthen the industry's hold on the cooking load. HERE IS WHAT YOU CAN DO:

(1) Make it your prime objective to learn all about these new research-developed principles for gas ranges. Check with the A. G. A. Laboratories if you would like to view the demonstration units or if you require further details.

(2) Get in touch with your gas range suppliers and tell them you want these new features.

(3) Encourage your gas range suppliers to see these new developments at first-hand.

(4) Get your dealers interested in these new gas range principles.

(5) Decide now what additional sales and merchandising efforts you will put forth when gas ranges incorporating these new principles are made available.

(6) Back up your A. G. A. Gas Industry Development Committee by carrying out Point 4 of the Action Program—continue to upgrade your gas range sales.

Industrial relations round-table

Prepared by
A. G. A. Personnel Committee

Edited by W. T. Simmons
Assistant to the Personnel Manager
Philadelphia Electric Company

● **Birthday cakes and the Union Contract**—The S & S Corrugated Paper Machinery Co., Brooklyn, N. Y., has received publicity to the effect that its provision of birthday cakes is covered by union contract. While this is true, there is no specific clause mentioning cakes in the company's contract with the International Brotherhood of Electrical Workers, AFL. Birthday cakes just happen to be included in the standard clause which requires continuation of all past benefits. The company, which now has about 650 employees, had been giving its employees birthday cakes, suitably inscribed, long before its first union agreement was signed in 1951.

A cake is also presented to each employee on his or her wedding anniversary. Moreover, at Thanksgiving time, each S & S worker receives a turkey with the company's compliments, and at Christmas, a package of candies and cookies. At Easter, each employee takes home two dozen eggs. From time to time during the year, packages of fruit which happen to be in season are presented.

Members of S & S management are continually looking for new ways for making personal gifts of this sort. They believe, for one thing, it makes employees' families more aware of the company, and results in a more cooperative spirit. There is always the possibility, it is admitted, that the practice of making a gift, once established, cannot be stopped. But S & S management sees no need for, or desirability in stopping. Once in a while, an employee is critical about the size of his turkey or the amount of oranges, but such backfires are very infrequent. All, including the donors, are in favor of the tokens of thoughtfulness.

● **NLRB Ruling**—*Strikers' loss of reinstatement rights*—The reason for calling a strike has a vital effect upon workers' rights to reinstatement. Employees who go on strike to protest an employer's unfair labor practice (unfair practice strikers) are entitled to reinstatement, upon their unconditional offer to return to work, regardless of whether they have been permanently replaced or not. Employees who strike to protest any other aspect of their employment conditions (economic strikers), are only entitled to reinstatement, upon their unconditional offer to return, if they have not already been permanently replaced.

A recent NLRB decision points out that the timing of the strike plays an important role in determining whether or not a strike is an unfair practice strike (Jordan Bus Company & Denco Bus Lines, Inc.).

● **Library Additions**—*Pre-retirement Programs*—Employers who are interested in helping older employees prepare for their life after retirement, may want to investigate the possibility of giving these employees subscriptions to the monthly magazine "Lifetime Living". This magazine is written for retired employees or those who expect to retire shortly. The annual subscription rate is $2.50. A reduced rate can be secured for quantity orders. For further information, write to *Lifetime Living*, 22 East 38th Street, New York, N. Y.

● **Arbitration Decisions**—*Alleged physical disability and discharge*—An arbitrator has ruled that an employer may justifiably discharge an employee who claimed he could not perform his regular job because of an alleged disability, where neither company physicians nor outside doctors could substantiate the aggrieved's claim, and where management had made a reasonable, but unsuccessful attempt to find other work for the employee. (Aluminum Company of America and CIO Auto Worker; Paul Prasow, Arbitrator; October 31, 1953.)

Note: The arbitrator holds that when management makes a reasonable effort to find other work for an employee, who insists he cannot perform his regular duties, without being arbitrary or inconsistent in its actions toward that individual, the decision to terminate employment constitutes an exercise of management's discretion with respect to efficiency and safety in operating its business.

Discharge of probationary employee and arbitration—An arbitrator has ruled that the discharge of a probationary employee is an arbitrable issue, where the contract does not expressly limit the arbitration procedure to regular employees or provide that management's decision to discharge probationary employees is final. (Ex-Cell-O Corporation and CIO Auto Workers; Russell A. Smith, Arbitrator; Grievance Nos. 4457, 4458, 5042 and 4667; December 11, 1953.)

Company may choose between employees with identical preferred seniority—When one of two employees with identical preferred seniority must be laid off, International Harvester has a free hand in choosing between them, according to Permanent Arbiter David Cole.

And when there is more work than one man can do, but not enough work for two already on the job, management has the right to lay off the extra employee, the umpire decrees.

Both men had preferred seniority as officers in CIO's United Auto Workers at Harvester's Louisville Works. When the volume of work dropped, management transferred some of it to another place, removed from his job the employee whose seniority extended over the widest span, and retained the one whose preferred seniority was limited to his own area. The one who was retained had greater actual or natural seniority than his fellow.

UAW claimed that the reverse should have been done, or both men should have been kept. The job had been filled originally by the man who was removed, so his "vested" right in the job was longer, the union argued. But in any case, since there was more work than the one man could do alone, two men should have been kept on.

On the second count, however, Mr. Cole sees "no obligation on the company's part to assign two men when only one is needed, even though occasionally that one needs some help." Management's rights include this prerogative "clearly", Mr. Cole declares.

And on the first count, while Mr. Cole finds "understandable" the proprietary feeling an employee has in his job, he declares the feeling meaningless unless backed up by the contract. Pointing out that there is no job seniority as such in the contract, Mr. Cole turns to the question of how to deal with identical seniority.

Management's right to direct the work force appears to cover the problem, the award states. Conflicts of preferred seniority aren't specifically resolved in the contract. Mr. Cole notes the company's explanation that it kept on the man whose preferred seniority covered a narrower area because if he were laid off his "opportunity to exercise his seniority would be weaker."

Mr. Cole suggests that the company might have argued that where preferred seniority is identical, the man with greater actual seniority should be kept on.

Umpires say where contract is silent, pyramiding is forbidden—If pyramiding overtime is to be part of a collective bargaining agreement it must be written specifically and clearly into the contract, according to the majority of a three-man arbitration panel. Silence on the subject means refusal, the majority states.

Accordingly, the panel makes an award which is "in the nature of a declaratory judgment" supporting the company's position in an overtime dispute between the Milford Company of California, in Beverly Hills, and a Warehousemen and Clerical Employees' local of AFL's Teamsters. The parties had asked whether pyramiding would be required under their contract, with the following clauses covering overtime and night differentials:

"Overtime shall be paid for all employees who work in excess of eight hours in any one day, or in excess of 40 hours in any one week, at the rate of time and one-half the regular rate of pay as established in these articles. . . .

"An employee whose regular tour of duty necessitates his or her working between the hours of 6:00 p.m. on any one day and 6:00

(Continued on page 24)

New Orleans conferees study spectacular transmission and storage gains

Gas supply men prepare for continued growth

Basic problems concerned with the continued expansion of the natural gas industry were probed in New Orleans last month during the Association's second Gas Supply, Transmission and Storage Conference, March 4 and 5.

Designed as a forum for exchange of information and work on operating subjects, the meeting drew an attendance of nearly 500 gas men representing companies throughout the country.

In the welcoming address, J. H. Collins, vice-chairman of the Operating Section, paid tribute to the delegates as members of a pioneering group in the gas industry. He reminded them that New Orleans itself was a pioneer as one of the first cities in the country to receive gas. The very fact that New Orleans is close to large natural gas supplies has enabled the city to grow tremendously, Mr. Collins remarked.

Presiding at the two general sessions were Grove Lawrence, Southern California Gas Co., chairman, A. G. A. Transmission Committee, and John V. Goodman, Equitable Gas Co., chairman, Committee on Underground Storage. Many of the subjects outlined at these meetings were discussed in greater detail during ten luncheon round-table conferences in which company representatives tackled specific experiences and problems in their own companies.

Communications, drilling, pipeline breaks, pulsation, and development of managers held the spotlight at the first general session.

J. E. Keller, Dow, Lohnes and Albertson, Washington, D. C., has represented the natural gas industry in its problems before the Federal Communications Commission since organization of the American Petroleum Institute's Central Committee on Radio Facilities in 1947. He is particularly well qualified therefore to discuss Communication Relations with the FCC.

Mr. Keller showed how the Central Committee on Radio Facilities and the National Petroleum Radio Frequency Coordinating Association, a frequency recommendation and coordinating group established in 1949, "have continuously worked toward the end of protecting the radio facilities and increasing the number of available facilities for the petroleum and natural gas industries."

The speaker showed that the gas industry has made spectacular progress in the few years it has used radio facilities. He noted that work is proceeding on the preparation of a complete set of rules for licensing microwave stations on a permanent rather than a developmental basis.

Mr. Keller forecast that expanded use of existing facilities "will place ever increasing responsibility on the Central Committee of the American Petroleum Institute and the Communications Committee of American Gas Association. Industry benefits will result," he declared, "in direct proportion to the degree of cooperation within the industry."

W. T. Hollis, production superintendent, El Paso Natural Gas Co., Farmington, N. M., presented an illuminating discussion of the merits of "Drilling Wells with Gas as a Circulating Medium Instead of Mud".

"The conservation of natural gas is of prime importance in any area," he said. "However, we believe that less gas is wasted by gas drilling operations than by cable tool drilling, where the formation was allowed to produce to the atmosphere for weeks.

"We believe that it is a fair statement to say that drilling with gas has 'made' the San Juan Basin by putting well completions on an efficient and economical basis. And this technique is rapidly finding its place in the drilling industry in other areas."

Three speakers were: (Left to right) F. J. Pfluke, ch[airman] of N[ominating Com]man, Operating Section; D. C. Palm, Natural Gas [Pipe]Line and L. A. Brandt, Peoples Gas Light & [Coke] Co., [Chicago]

Prof. E. J. Lindahl, Univ. of Wyoming, (left) who [presented] paper on pulsation exploration, confers with J. E. K[eller], Washington, D. C., who reported on FCC relations. [Chairman, Operating Section]

Progress that the gas transmission industry has made in solving the problem of pipeline breaks was outlined by D. C. Palm, superintendent of pipelines, Natural Gas Pipeline Company of America, Chicago. The responsibility of the gas transmission industry, he observed, is the safe delivery of gas 24 hours a day, 365 days a year.

Mr. Palm pointed out to his audience that three major factors have contributed to the rapid growth of pipeline systems:

(1) Development of thin-walled steel pipe of high tensile strength; (2) development of electric arc welding, and (3) increased knowledge and training of engineering and construction personnel.

The speaker discussed various reasons for pipeline fractures and the preventive and remedial steps that have been taken. Adequate testing, construction and maintenance all are essential to pipeline safety, he said, and play important roles in the development of good public relations.

"Pulsation Exploration as it Affects Gas Measurement" was discussed by Professor Eric J. Lindahl, Mechanical Engineering Department, University of Wyoming. This stimulating address was published in the March 1954 issue of the A. G. A. MONTHLY.

Concluding event of the first general session was a talk on "Developing Managers" by Leslie A. Brandt, vice-president, The Peoples Gas Light and Coke Co., Chicago. Mr. Brandt emphasized that this subject should be of vital concern to operating as well as personnel executives of gas companies.

Individual companies should strive, he said, to "develop the abilities of management people to work more effectively *with* and *through* people.

"Second, we should develop the technical knowledge and skills of our people," Mr. Brandt stated.

"Third, above all else, we should instill in all levels of management the philosophy that continuous management development is an extremely important responsibility which attaches to their job as managers.

"Fourth, we should develop our management people to broaden their viewpoint. Because of increasing specialization, management needs to be made more aware of the problems of the whole business."

The formal management development program of The Peoples Gas Light and Coke Company includes a supervisory conference program, participation in community activities, training between departments, and programs to improve the managerial

...ting of NX-4 and NX-7 Pipeline Research Committees. E. E. Stovall, Lone ... Gas Co., is chairman of first group which finalized its report on experi... at Refugio, Tex. J. E. Overbeck, Columbia Gas System, heads second ... general session was presided over by Grove Lawrence, chairman of ... G. A. Transmission Committee (left). With him are J. H. Collins, vice-... Operating Section; W. T. Hollis, El Paso Natural; C. T. Kallina, FPC

Left to right: Dr. R. L. Bateman, Carbide & Carbon Chemicals Co.; G. C. Howard, Stanolind Oil & Gas; F. A. Hough, Southern Counties Gas; J. V. Goodman, Equitable Gas; R. V. Campbell, Mich.-Wisc. Pipeline; W. F. Burke, Lone Star Gas

skills of selected individuals.

A startling "metamorphosis" in the gas industry was singled out for attention at the second general session by Frederick J. Pfluke, Rochester Gas & Electric Corp., chairman of the A. G. A. Operating Section.

Mr. Pfluke told the delegates that today it is no longer possible to break the gas industry down into "natural gas" and "manufactured gas" groups. He urged operating men to support "all A. G. A. activities, including the Operating Section and the PAR Plan. United in aggressive support of the Action Program for Gas Industry Development we have no reason to be concerned about the future."

George C. Howard, Stanolind Oil and Gas Co., Tulsa, Okla., reported that "the process of hydraulic fracturing a formation has been developed from an idea to a large commercial process that ranks as one of the major methods of stimulating the producing capacity of all types of wells.

"It is estimated," he continued, "that in excess of 55,000 hydraulic fracturing treatments have been performed in approximately 47,000 wells by this process which was first introduced commercially in March of 1949. Of the 47,000 wells treated, approximately 35,250 wells or 75 percent have successfully responded to treatment and have shown an average 175 percent increase in production. Although the process was originally designed for use in wells producing from sandstone formations, it may now be used in all types of formations by adapting the composition of the treating fluid to the characteristics of the producing zone."

"Progress in Compressor Station Operations" was defined by Rex V. Campbell, superintendent of compressor stations, Michigan Wisconsin Pipe Line Co., Detroit. Movement of the huge volumes of gas that are required by the modern gas industry would have been impossible without the use of new and improved equipment and material, Mr. Campbell remarked.

"Today turbines have a place in long line transmission and a 6700 HP unit can be located in less space—30 feet by 56 feet—than originally was required for a 1000 HP unit."

Other marked changes have developed in the cooling of water and gas in compressor stations, Mr. Campbell said, and the use of air hoists to replace

Large Volume Gas Measurement

Ready for luncheon discussion are (left to right): Prof. Samuel Beitler, Ohio State University; H. S. Bean, National Bureau of Standards; Pat H. Miller, Texas Eastern Transmission, presiding; E. E. Stovall, Lone Star Gas; H. B. McNichols, Columbia Gas System; F. C. Witting, The Peoples Gas Light and Coke

Underground Storage

Subcommittee chairmen at head table include (left to right): M. V. Burlingame, Natural Gas Pipeline Co.; C. W. Studt, Union Gas System; John V. Goodman, Equitable Gas Co., A. G. A. Storage Committee chairman; C. C. Ingram, Oklahoma Natural Gas Co.; L. R. Kirk, Ohio Fuel Gas Co.; J. B. Corbin, Jr., Hope Natural Gas

Load Dispatching

Preparation of a manual outlining functions of a dispatcher was topic at meeting presided over by T. B. Kelley, Texas Eastern Transmission, Committee chairman (center). At left is W. F. Crutchley, Consolidated Natural Gas Co. At right is S. A. Chadwell, Columbia Gas System, the Committee's vice-chairman

Pipeline Construction

Front row, G. Austin Manuel, Williams-Austin Co.; J. W. Hall, Transcontinental Gas Pipe Line Corp.; committee chairman; A. J. Shoup, Texas Eastern Transmission; committee vice-chairman. (Back row) Dan Williamson, Transcontinental Gas Pipeline; N. F. Blundell, Gulf Interstate Gas; F. A. Hough, Southern Counties Gas Co.

Communications

Four speakers on radio and telephone systems for pipelines flank Communications Vice-chairman H. A. Rhodes (center). In the usual order are J. W. Flint, Cities Service Gas; J. K. Keller, Washington, D. C., attorney; T. G. Humphreys, Jr., Alabama Gas Corp.; and L. I. Duthie, El Paso Natural Gas Co.

Compressor Stations

Seated at speakers' table are (left to right): N. C. Comfort, vice-chairman, Compressor Stations Subcommittee; J. G. Barnhart, Natural Gas Pipe Line Co.; Rex V. Campbell, Michigan-Wisconsin Pipe Line Co., Committee chairman; Edward Henderson, Arkansas Louisiana Gas Co.; Glenn Damewood, El Paso Natural Gas; N. E. Moerke, Fluor Corporation.

Compressor Stations

Another Compressor Stations Luncheon had the following at the speakers' table: Robert Jefferies, New York State Natural Gas; Conrad Marvin, Texas Eastern Transmission; N. C. Comfort, presiding; L. M. Gibson, Mississippi River Fuel; S. A. Bradfield, Southern California Gas; E. M. Rowland, Cities Service

Dehydration

Ovid Baker, Magnolia Petroleum Corp. (left), moderator for panel discussion. Panel members include L. S. Reid, University of Oklahoma; F. Zapffe, Lone Star Gas; (standing) E. A. Koenig, Wilcox Trend Gathering System; and J. H. Echterhoff, United Gas Pipe Line Co., Shreveport, La.

Natural Gas Production

(Left to right): C. J. Wilhelm, Bureau of Mines; W. T. Hollis, El Paso Natural Gas; T. W. Johnson, Union Producing Co., chairman, Natural Gas Production Committee; G. C. Howard, Stanolind Oil and Gas Co.; Russel W. Hofsess, Cities Service Gas, vice-chairman, subcommittee on storage inventory

Pipelines

(Left to right) J. W. Hall, chairman, Subcommittee on Pipelines; A. L. Roberts, Texas Gas Transmission; L. L. Elder, Columbia Gas System; W. B. Haas, Northern Natural Gas, presiding; H. A. Proctor, Southern California Gas; C. C. McClure, El Paso Natural Gas. Subjects ranged from welding to personnel

manual lifts in modern stations.

Public relations has become an important factor in compressor station operations. Good housekeeping, improved hiring techniques, and "safety first" schooling have become essential factors in compressor stations, according to Mr. Campbell.

Should natural gas pipeline systems be interconnected? Carl T. Kallina, chief, division of gas certificates, Federal Power Commission, presented his own interesting views on this provocative subject. Mr. Kallina discussed various situations in which he believes "emergency" interconnections are desirable. [Mr. Kallina's address is reprinted in full in the March A. G. A. MONTHLY.]

Lone Star Gas Co., Dallas, Texas, faced with the need for underground gas storage near its central market area, has initiated storage operations in a depleted oil reservoir in Clay County, Texas. A report on this project was prepared by two Lone Star representatives, W. F. Burke and T. W. Clay. The paper was delivered by Mr. Burke, chief production engineer.

It was necessary, he said, to redrill or replug all the abandoned wells in the reservoir. At the beginning of 1954, approximately 1,950,000 Mcf of gas had been injected into the reservoir and approximately 200,000 Mcf had been withdrawn. This resulted, Mr. Burke added, in increased reservoir pressure from 130 psig to about 1000 psig. Future gas storage operations will be conducted within the reservoir pressure range of 1000-3200 psig. Net storage capacity between these pressures has been calculated at about four million Mcf, Mr. Burke declared.

F. A. Hough, Southern Counties Gas Co., Los Angeles, delivered a progress report on a subject of top interest to the gas industry—revision of the ASA Code for Pressure Piping. Mr. Hough is chairman, ASA Subcommittee No. 8 on Gas Transmission and Distribution Piping. Two drafts of the proposed code have been distributed to committee members for approval.

It now appears possible, Mr. Hough said, to put out in May a third draft that will be acceptable to the great majority of Subcommittee 8. He expressed hope that a code would be ready later this year for consideration and acceptance as an American Standard safety

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A.G.A. Board resolution backs private enterprise

FIRM ADHERENCE to the principles of the American private enterprise system by the gas utility industry was voiced in a resolution passed by the Board of Directors of the American Gas Association at a recent meeting.

Pointing out that the gas industry was established by men who were willing to risk their own capital and that its origin and development typifies the American system of free enterprise, the resolution clarified the role of the utility and the government. The function of the utility is "to supply gas to its customers at the lowest rates consistent with the maintenance of adequate service and with fair treatment of its investors and employees."

"It is the function of the government," the resolution continued, "to provide fair and consistent regulatory procedure which will assure adequate public utility service at just and reasonable rates and the orderly development of the utility industry on a sound financial basis.

"Government should refrain from competing with private enterprise and should leave the development of the public utility business and other businesses to the enterprise of individual investors."

The Board directed that copies of the resolution be made public. Member companies were asked to consider the resolution as a statement of principles of the Association.

Member companies were asked in a covering letter from E. H. Eacker, president of the Association and president of Boston Consolidated Gas Co., to give the resolution careful consideration and to use it as a guide in whatever steps they may take to encourage adherence to fundamental American principles.

A.G.A. plans symposium on gas industry legal problems

FOR THE FIRST time in its history American Gas Association, in cooperation with the Practising Law Institute, is planning a symposium on "Current Legal Problems of the Gas Industry", to be held in New York City, from June 7-11. The Institute, a non-profit educational institution, is highly regarded in the legal profession for its nationally significant symposia.

Discussion by legal and other experts, of practical value to gas utility and pipeline company lawyers and executives, will comprise typical gas industry legal problems from wellhead to burner tip. In addition to individual speakers there will be panel and small group discussions, as well as speakers at each of five daily luncheons.

Subjects during the comprehensive all-week sessions include natural gas field supply, negotiations and analyses of gas purchase contracts, state commission prorations and minimum price orders, and effects of the Phillips decision.

Another day of discussion will be devoted to transportation and common carrier problems. These include pipeline company certificate matters, intervention and compulsory service as well as gas allocation proceedings, underground gas storage, and jurisdictional certificate problems.

Two days will be given to covering rate-making matters, reviewing Federal Power Commission rate increase proceedings, applicable rate-making principles, FPC settlement proceedings, fair field costs and values, plus proof of fair rate of return and fair value. Other topics include use of economic depreciation, determination and distribution of refunds, as well as cost allocations.

Final day sessions will concern sales problems, centering on construction and filing of tariffs, federal and state jurisdiction and legislation, customer problems under gas tariffs, and rate problems during conversion.

Further details and complete program will appear in the May A. G. A. MONTHLY.

Industrial round-table

(Continued from page 19)

A.M. of the following day shall be entitled to time and one-half the regular rate of pay as established in these articles."

The union felt that these clauses together required employees doing overtime work after 6:00 to be paid time and one-half their night shift pay instead of time and one-half their base pay. The company, on the other hand, urged that the phrase "regular rate of pay", used in both clauses, meant the base rates set up in the agreement.

In making its finding for the company a majority of the arbitration panel, headed by Benjamin Aaron, took guidance from the 1949 amendment to the Fair Labor Standards Act, where "regular rate" of pay is defined to exclude shift premiums. While this amendment doesn't prevent the parties from negotiating a different understanding of the term, according to the majority it provides the assumed definition if no other is negotiated. In the absence of a specific arrangement including shift premiums in the computation of overtime, the FLSA view of overtime is held to prevail.

Irving Watcher, company representative, and George Coutant, union representative, joined Aaron in hearing the dispute (Jan. 26, 1954).

● Court Decision—*Payroll data order doesn't mean disclosure of names*—Demand of a union on a company to furnish complete payroll information, a withdrawal of the request during negotiations, and later charges to NLRB by the union that the employer refused such data create a confused situation in which the First Court of Appeals finds itself obliged to interpret the resulting order of the Labor Board in the case.

The court is required to decide what the board meant when it ordered Boston Herald-Traveler Corporation to furnish to Local 32 of CIO's Newspaper Guild "wage data concerning work classification and salaries" of all the employees in the unit represented by the union.

Confusion arose in the Boston newspaper's negotiations with the guild when the union requested payroll information to include employees names, date of birth, date of employment, sex, and weekly salary. At first the employer balked at the request, but later complied through the channel of a pension study it was making. The guild, during bargaining, then withdrew its original request.

Later, however, the guild filed charges against the newspaper, alleging violation of the Taft Act in refusing to furnish payroll data. The trial examiner in the case, although finding that the union did have the data it wanted, concluded that the newspaper had refused to furnish it in the first instance. He apparently decided that the guild's obtaining the data through another means had no relationship to the employer's refusal to give such information at the start of negotiations.

The trial examiner then made the usual recommendation that the newspaper be ordered to furnish the payroll data, including names, work classifications, dates of employment, and salaries of all employees.

Upon the newspaper's objections to the trial examiner's report, the board said it did not find that the *Herald-Traveler* had "refused to furnish names of employees", but nevertheless ordered it to provide "wage data concerning work classifications and salaries".

The newspaper then disclosed salaries paid in each job classification and the number of employees receiving each salary, but did not tie such data to names of individual employees.

The court says it must decide if the newspaper met the board order as to completeness of the data in the absence of employee names. Counsel for the board argued that intent of the order was to link the names to individual salaries.

But the court, in an opinion written by Judge Woodbury (concurred in by Chief Judge Magruder and Judge Hartigan), goes along with the *Herald-Traveler's* contention that if the board meant that it should tie names to salaries it would have said so specifically. The court takes the view that this isn't the type of case which would require disclosing the names of those receiving specific salaries, and could substitute an invasion of privacy. The court suggests that the board has not been unspecific in its orders in the past, hence failure to mention "names" of employees in this instance means the employer doesn't have to make such a disclosure. The court enforces the board's order, but only on the basis of the information already given to the union. (NLRB v. Boston Herald-Traveler Corp. No. 4781.CA 1. Jan. 28, 1954.)

First returns on Mrs. America

a PAR activity

ROANOKE AND SALEM: Ceremonies during local finals of the Mrs. America contest in Roanoke and Salem, Va., were held at the Roanoke Gas Company with civic officials participating. Above: John C. Parrott, president of the utility, with Mrs. Salem and Mrs. Roanoke and executives of S. H. Heironimus Company and Mick-or-Mack Supermarkets. Winners each received total of $300 in prizes from the two firms and gas company

WISCONSIN: B. T. Franck, vice-president, Milwaukee Gas Light Co., pinning ribbon on Mrs. Corinne V. Iverson, winner of "Mrs. Wisconsin" title in contest between more than 120 entrants. Winners were announced at the Milwaukee Home Show following strenuous competition

BROOKLYN: Wind-up smiles are flashed by contestants in Mrs. America elimination sponsored by The Brooklyn Union Gas Company. The five-hour contest featured food preparation, laundering, sewing, ironing, and was won by Mrs. Geo. Kathmeyer (right)

Another "action" city—Springfield, Mass.—dra[illegible]al dea

Gas show starts "action" program

Gas appliances took the stage at Springfield's municipal auditorium during four-day gas show put on by Springfield (Mass.) Gas Light Co. Special trade preview drew 800; thousands of townspeople turn out for main show

Gas Industry Development is on the march in Springfield, Mass., one of the ten "action demonstration" cities and a market area of about one-quarter million persons.

A dramatic example of this "action demonstration" was held last month by Springfield Gas Light Company in the form of a huge 1954 Gas Show in the city's municipal auditorium.

"Our efforts to follow the 15 points of the Gas Industry Development Program have been most productive," Charles G. Young, president of the utility, told the MONTHLY. "This 1954 Gas Show is a major effort on our part to increase appliance sales and to upgrade merchandise as a part of the Development Program. The show has proved the public's interest in gas appliances and we expect increased sales of quality gas equipment during 1954."

Extensive market surveys are now being completed in Springfield to determine the pattern of domestic gas appliance usage and consumer opinion concerning the gas company. Results of these studies will be revealed at a later date for use by other companies which are now putting the 15 Action Points of the Development Program into local practice.

Meanwhile, officials of Springfield Gas Light Company are working on solutions to specific current problems such as the cementing of relations with manufacturers, distributors and dealers.

The four-day 1954 Gas Show was a major step in this direction and an unusual example of civic achievement.

Two-day preview

A total of 1,200 dealers, distributors, architects, builders, bankers and other civic leaders received special invitations from the gas company. The first two days of the show, March 9 and 10, were set aside as dealer days and drew a "private" audience of 800 of the 1,200 persons invited. On the following two days, the show was opened to the public and thousands of visitors poured in. Dealers helped to man the appliance display booths on these last two days and reported making important contacts and numerous retail sales.

The gas company worked hard to strengthen its public reputation. Special letters of invitation were sent to the families of all employees. Announcements of the big event were mailed out with gas bills to more than 25,000 customers. Large eye-catching signs inviting the public to the 1954 Gas Show were placed in dealer windows throughout Springfield.

In addition, a special tie-in was arranged under which the Atlantic & Pacific Tea Company conducted its meat demonstrations as part of the public open house. Local A & P stores sponsored their own newspaper advertisements announcing the gas show and also distributed 40,000-50,000 gas show handouts in customer shopping bags.

For an over-all budget of $20,000, Springfield received the first all-gas show in its history and one of the first of its type in the country. The entire project was a cooperative endeavor with manufacturers contributing $175 a booth toward expenses. With each booth, they also supplied gas appliances valued at a minimum of $100 retail for use as prizes for the public. Thirty-six of these display booths were sold covering about

-dr al dealers, distributors and manufacturers into Gas Industry Program

Mayor Daniel B. Brunton cuts ribbon at gas show opening. At right is C. G. Young, president of Springfield Gas Light Co.

Drawings at dealer show brought $100 wardrobes to two winners at left; H. U. Wakefield, Northeastern Gas Transmission vice-president, awards Bermuda trip as L. W. Stone, Springfield Gas dealer relations manager, looks on

6,000 square feet of floor space. Ranges were hooked up to "live" outlets. Caloric Stove Corporation presented its dramatic gas vs. electric top burner speed demonstration.

Gas company officials were particularly pleased by the fact that eight or ten of the more than 30 manufacturers participating had previously been comparatively inactive in the Springfield area.

An impressive list of prizes was offered. All invited guests during the first two days of the show were eligible to compete for a one week all-expenses paid trip to Bermuda for two. Two hundred dollar wardrobes were given away as second and third prizes. Gas appliances valued at more than $5,000 retail were given away to the public.

As a novel approach, the company supplied ballot boxes marked with the names of each of the seven major gas appliances. Each contestant was asked to drop his entry into the box marked with the name of the appliance that he wanted most to win. After the show, these filled-in entry blanks were distributed among the participating manufacturers who in turn passed them along to their dealers for sales follow ups.

Springfield Gas Light Company is a merchandising utility. However, the company's domestic salesmen played no part in the show in order to give the company full opportunity to strengthen its ties with manufacturers and local dealers.

Send observers

Publicity for the big event was so effective that other gas companies throughout New England sent representatives to observe and study the project. Local civic organizations buzzed with talk about the gas company and the big doings in the municipal auditorium.

Leonard W. Stone, dealer relations manager for Springfield Gas Light Co., conceived the original idea of the show and supervised its planning, aided by his assistant, John H. Carpenter. Carl J. Westberg, sales manager, directed the project.

"The tremendous public reaction to our holding a show of this size for gas appliances alone is already increasing activity in dealer stores and improving public acceptance of gas," Robert M. Brigham, executive assistant of the gas company, told the MONTHLY. "We are using the A. G. A. dealer program for reference and have found the A. G. A. '1954 Sales Promotion Plan Book' very helpful," he added.

Mr. Brigham noted that head meter readers, radio dispatchers and others not directly concerned with sales helped to make the show possible and at the same time gained a broader picture of company operations. Gas appliance servicemen were present in uniform.

"There's definitely money to be made in gas! There's no question about it!" One dealer exclaimed enthusiastically. Manufacturers reported that the two "closed" sessions had enabled them to contact dealers that they had never been able to reach before.

"More gas companies should undertake shows of this type," one manufacturer declared.

Everything—from the home service representatives in the gas company's booth, to the shiny, new appliances in the manufacturer displays—helped to put across the point that the local gas company is a sound business organization and a solid citizen.

Accent on action

(Continued from page 18)

ber companies with the scope and benefits of A. G. A. national promotion and advertising programs. As a result of their visits, many companies have been encouraged to participate in A. G. A. activities for the first time.

Potentially one of the most promising gas industry activities is the Mrs. America contest which is being co-sponsored nationally by A. G. A. for the first time. Gas companies in many areas of the country are using radio, television and other mass communication media to tie-in locally with this national promotion.

At the same time, efforts of a PAR-financed Educational Service Bureau are helping to familiarize future homemakers with gas and modern gas appliances. A special kit for the schools, entitled "Natural Gas—Science Behind Your Burner", has been distributed to more than 8,000 science teachers throughout the country. Additional materials prepared by leading educators are being reviewed by the National Science Teachers Association to assure their educational value.

Several years ago, A. G. A. made a broad survey of utility members to define the appliance selling seasons. Information gleaned from this study enabled the association to publish last fall a year-round Sales Plan Book for the gas industry. This major achievement means that this year the gas industry's ten basic campaigns and sales promotion periods are being fully coordinated at both the national and local levels earlier than ever before. This is but one more indication of the gas industry's new "Accent on Action".

The gas industry now has available for immediate development completely automatic ranges featuring new and field-tested electric and gas single-point ignition devices. This is the direct result of the completion of a 34-month PAR-sponsored field test program of automatic range ignition. It is another outstanding achievement in our long-range promotional offensive.

Time does not permit me to discuss all of the intensive promotional activities that your gas industry leaders have mapped for the benefit of local companies. However, there are a few others that I would like to mention in passing.

One very recent achievement of the A. G. A. New Freedom Gas Kitchen Bureau is of special interest to your sales and builder contact staffs. This year, for the first time, the official kitchen and laundry film of the National Association of Home Builders will feature New Freedom Gas Kitchens and Laundries. The film will be promoted on a national scale and offers many attractive tie-in possibilities for local utilities.

National advertising, closely coordinated with PAR national promotions, will be increased from $926,000 in 1953 to $1,018,000 this year. Approximately 177,400,000 selling messages for gas and automatic gas appliances will appear in 34 consumer, architect-builder, industrial and commercial magazines. These publications have a guaranteed circulation of more than two and one-half million readers in New England alone.

Hard-hitting national promotions in the commercial gas field produced an impressive victory in 1953. Year-end statistics from GAMA and NEMA disclose that dollar sales of commercial gas appliances in 1953 increased 24.8 percent over 1952, while dollar sales of commercial electric appliances rose only 12.7 percent.

Impressive as these figures are, there is no room for complacency. Competition is working hard and is making inroads in a number of commercial sectors. A. G. A. is aware of that fact and is taking specific steps to counter competitive efforts.

● "PAR is, in truth, the Gas Industry's Common Front."

At this very moment more than 60 member gas companies are participating in the first National Commercial Gas Water Heating Campaign. Its title—"Plenty of Hot Water Pays—All Ways". A new sales campaign on commercial gas cooking has been planned for September, October and November, patterned along the lines of the successful 1953 "Performance-Economy and Profit" Campaign.

The industrial gas field is also receiving increased attention under the PAR Program. Industrial gas men have recommended that a plank be added to the Gas Industry Development Program encouraging gas companies, within the limitations of their systems and at rates commensurate with the cost of the service, to provide industrial gas on a *firm* rather than an interruptible basis.

In addition, a new Industrial and Commercial Gas Educational Committee has been formed to promote knowledge of the use of gas and gas equipment in colleges, universities and technical schools.

During the first nine years of the PAR Program, the gas industry has benefited from 90 completed research projects. A total of $1,267,000 has been projected by PAR to carry on research for utilities and pipelines in 1954. Greater emphasis than ever before will be placed on long range fundamental research studies.

Heading the list of 44 projects is the range unit demonstration which I discussed earlier. Typical studies are those to develop substitute and replacement gases, and a project to develop gas incinerator improvements that will increase performance and acceptance of this glamorous new load building appliance.

You gentlemen are well acquainted with the importance of filling summer peaks to balance the winter load. To this end, a PAR research investigation has been launched on potential methods of cooling, using gas as the fuel.

Incidentally, while I was considering the material for this address, I received word of a dramatic contribution that home service has just made in the air conditioning field. It is truly a gas industry "scoop"—a nationwide survey of Gas All-Year Air Conditioning owners by the A. G. A. Home Service Committee.

Consequently, the gas industry is now in a strategic position to develop educational, advertising and promotional programs to acquaint other women with the advantages of Gas All-Year Air Conditioning for the home. I call your attention to a special article in the March issue of the A. G. A. MONTHLY detailing the results of this novel study.

In safety, too, the accent is on action. Today more than 350,000 miles of mains and pipelines are used to bring natural gas to our millions of customers. Considering this expansive scope and the large amount of energy handled, the gas industry statistically has one of the best safety records. However, during the years of most rapid expansion, a few spectacular transmission line blowouts and distribution system failures have attracted widespread public attention. A mere handful of incidents of this type, when they receive national publicity, can undo years of safe operations.

As a direct result of these occurrences, several states have established regulations

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Accountants scrutinize poll methods

By JOSEPH H. PURDY*
Chairman, Customer Relations Committee, Accounting Section American Gas Association

• The following article is based on information developed by a subcommittee of the A. G. A.-EEI Customer Relations Committee.

There are at least three ways of finding out what customers think of the utility with which they deal. Complaints, criticisms and commendations can be analyzed; an outside agency can be hired to make a field survey, or the utility's own personnel can conduct such a survey.

All three methods have their uses and all can be employed as parts of a complete program. It must be recognized also that many companies feel that none of these methods of determining public opinion are necessary in their operations.

A joint A. G. A.-EEI committee was asked to look into the experiences of gas and electric companies that have used their own personnel for survey work and to develop why these companies decided to undertake a survey in the first place.

Those who are survey-minded point out that a good complaint classification system can be helpful in pin-pointing the likes and dislikes of customers, but they add, it may give a picture which is out of focus. Stress is laid on the fact that customers who do complain often relate only what is affecting them at the moment; that we hear only from those who have the courage and time to complain; that we do not hear from the meek, the charitable, or those who take a "what's the use" attitude.

Believers in surveys say that a substantial number of people complain reluctantly, apologetically or only when forced to do so because of an interruption to one of our services. The whole case for polling the public seems to rest on the assumption that customer dissatisfaction is not always expressed; that the seed of discontent lies dormant and may at any time bear bitter fruit. Finally, advocates of surveys insist that even the best system of analyzing complaints and inquiries will not reveal the degree of knowledge customers have of a company's operations.

The value of finding out what customers know about us is illustrated by the experience of a New England utility. A survey was made to determine what customers thought of the rates charged and whether they knew that rates are regulated. Only half of that company's customers had any idea that rates were controlled by a state commission!

The company decided to run a series of advertisements explaining how rates are established and regulated. The effectiveness of this advertising was indicated a year later when a follow-up survey showed that six percent more customers felt rates low or reasonable than expressed that opinion on the initial survey. Knowing that customers lacked essential knowledge about the business, the company could do something about it and what it did seemed to improve customer relations and increase the number of its friends.

There are four questions which would probably occur to any company before it would undertake to survey customer opinion. How is a survey conducted? What does it cost? What can be found out? And, can real use be made of the information obtained?

How a survey is conducted depends on its purpose. If information is wanted on a specific subject, such as customer reaction to recent service calls, a "spot" survey, probably using a two-way post card, would normally be employed. If, however, a company wanted to follow, year by year, its customers' attitudes, beliefs and reactions, it would use field interviewers, the survey would be a continuous one and a permanent group would have to be set up within the company to handle this activity.

Some utilities have found it desirable to use both "spot" and "continuous" surveys. Those who do usually have a permanent group conducting "sampling in depth" (that is, seeking to bring to light hidden opinions), and also use "spot" checks to develop reactions to proposed changes in rates, policies or procedures. A midwestern company—one of the pioneers in "continuous surveys", announced its first rate increase in over a quarter century and followed up this announcement by an extensive personal contact survey to determine the reaction of residential customers to this specific action. This company found that a majority of its customers understood the need for the increase. Having such knowledge, any company is in a better position to judge the amount of interpretation and ex-

* Consolidated Gas Electric Light and Power Company of Baltimore, Baltimore, Maryland.

SGA accountants confer in New Orleans

Two-day accounting management conference was held by the Accounting Section of the Southern Gas Association at the Roosevelt Hotel, New Orleans, Feb. 24-25. R. L. Hinch, Nashville Gas Co., presided over the sessions which featured prepared papers and general discussion by members. Also discussed were round-table conferences and other activities of the SGA Accounting Section during the coming year

planation which is needed to gain public acceptance of its actions.

Because a survey program can be as modest or elaborate as desired, the number of people required ranges from one to a dozen and the time spent from fulltime for one or all, to parttime for one or all. Wherever one person is conducting the project, effort seems to be confined to the accumulation and analysis of information procured through limited mail contacts. When the program is a parttime undertaking or is conducted by not more than two or three people, information is either obtained through mail sampling or with the assistance of other departments. An example of the latter would be the delivery of a questionnaire by a salesman and later pickup by a meter reader.

Companies conducting non-continuous surveys have recruited personnel from the retired list for use on a part-time basis (specific days, evening hours), from other company departments during slack periods, or employed housewives, school teachers and college students as parttime workers. A permanent group, consisting of a supervisor, two or three field interviewers, and several office clerks, seems to produce better results and to have other advantages. The interviewers, if thoroughly trained as customer representatives, may be used on peak days or during peak months, in other phases of customer contact work. Trained interviewers are said to be able to settle many complaints and to answer most inquiries on the spot. If reference to records is required, they know where to get the information and how to interpret it. Most of all, trained interviewers, because of their experience in dealing with customers, may inspire greater confidence and consequently be able to evaluate customer attitude more accurately.

Responsibility for survey activity has, in different companies, been assigned to such departments as: sales, advertising and publicity, consumer research and relations, public relations and customer relations. There are many who hold that a program so closely allied with customer relations work should be integrated with that department's activities or should be a separate group in the same chain of command.

Whatever department is responsible for the program, some type of report is usually provided for management. Some present simply a brief typewritten statement of findings. Others, and especially those who have full-blown programs, provide monthly and yearly pamphlets or brochures outlining the results of surveys. Circulation of these more elaborate reports is usually limited to management and to department heads who have an immediate interest in the results. However,, there are some who publicize survey findings all the way from top management to the line worker. This has been done with general bulletins or articles in house organs. The companies which seem to be most convinced that surveys are worthwhile, are also those which give wide publicity to results. This could indicate that knowledge of survey findings kindles employee interest and

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Accountants at work behind the scenes

● Meet John D. Green, Philadelphia Electric Co., co-chairman with H. E. Wager, Public Service Electric and Gas Co., of the A. G. A. —EEI Subcommittee on Systematic Training for Customer Accounts Employees.

This important project committee was formed to help customer accounting members of the gas and electric industries to do a better job of training. The group's study indicates that within the same company it is often startling to contrast the degree of variation in training of employees. When new procedures are installed, experts are assigned to instruct. If new mechanical equipment is purchased, manufacturer's technicians are imported to train. When engineers or college trainees are employed, specialized, charted training is prescribed for them. On the other hand when a customer accounting employee, destined some day to be a bookkeeper, senior bookkeeper or unit supervisor, is employed, he gets little if any formalized training. The chief concern seems to be to get him producing to fill a vacancy, and this is done in a variety of ways.

Most utilities are satisfied that their own methods fit their needs. The committee's purpose is to challenge this complacency, but not to recommend any one method over another. It is rather to suggest that large, medium, and small companies consider ideas that have proved most successful, with the thought that training of customer accounts employees be done according to an improved pattern of your own design, to fit your own requirements embracing desirable features taken from the best plans used in the industry. It is the committee's belief that training should be systematic, that it should be formal and that it should be blueprinted. A simple well-thought-out program is infinitely better than a haphazard one, or one originating on the spur of necessity in the mind of an untrained supervisor.

J. D. Green

John Green started with Philadelphia Electric Company in 1927 and served in the Customers Accounting and Internal Auditing Divisions of the Finance and Accounting Department. He is now general supervisor of the Customers Billing Section of the Customers Accounts Division, Finance and Accounting Department. He is also a member of the National Office Management Association.

Commercial gas school

- *Five-day course by eminent authorities*
- *For those promoting or selling commercial gas*
- *Valuable technical and sales training*
- *Latest data on gas equipment and utilization*
- *Techniques to protect and expand gas load*
- *Basic training for new commercial gas men*

Sale of gas for volume cooking and other commercial operations will be thoroughly covered in the course of study at the 1954 A. G. A. Commercial Gas School to be held in the Hotel Morrison, Chicago, May 10-14, under the sponsorship of the Industrial and Commercial Gas Section's Sales Training Committee, James J. Condon, The Peoples Gas Light and Coke Co., chairman.

Each year the Section conducts a gas school alternating between the industrial and commercial phases of the industry. This is commercial year with the school a five-day course of lectures by eminent authorities selected for the respective subjects. Technical and sales training will be provided for gas men who are devoting all or part of their time to promoting or selling commercial gas. Students will be brought up-to-date on all available equipment and techniques in order to protect and expand the gas load in the highly competitive volume cooking field.

There is a large market for the sale of gas for commercial operations other than in hotels and restaurants which will also be covered in the lectures. New men need the basic training which this course will provide and experienced men will benefit by combined refresher and advanced training. Both will find new ideas with which to meet competitive assaults against the gas industry.

During the course, lecturers selected by the committee for their outstanding knowledge on the various subjects will describe the full scope of commercial gas utilization covering the markets in commercial kitchens and the other commercial operations. The textbook for the school will be the A. G. A. publication, "Commercial Kitchens", which will be given to each registered student together with printed copies of those lectures not specifically covered in the textbook.

As the school is being held during the week of the National Restaurant Exposition which is being held in Chicago on the Navy Pier, part of the course will be in the form of a "field trip" to the exposition to view certain cooking demonstrations and to see the exhibits. Live demonstrations will also be given during the school sessions.

Following is the full school program:

Monday—May 10

The Importance of the Commercial Gas Load—Charles C. Eeles, district industrial sales manager, The Ohio Fuel Gas Co., Toledo, and chairman, Industrial and Commercial Gas Section.

The Importance of the Commercial Gas Man—Lee Corn, general sales manager, The East Ohio Gas Co., Cleveland.

Competition—Elmer H. Lerch, Hotel and Restaurant Division, Commercial & Industrial Sales, Rochester Gas & Electric Corp., Rochester, N. Y.

Controls and Safety Pilots—E. J. Horton, assistant to the president, Robertshaw-Fulton Controls Co., Greensburg, Pa.

Steam Generation—A. V. Leudemann, general sales manager, Mears-Kane-Ofeldt, Inc., Forest Hills, N. Y.

Retail Baking—John I. Marshall, Jr., Middleby-Marshall Oven Co., Chicago.

Incineration—Richard Goder, president, Joseph Goder Incinerators, Chicago.

Tuesday—May 11

Cooking Demonstration—Colonel Paul P. Logan, director of research, National Restaurant Association, Chicago. (Demonstration to be conducted on the Navy Pier.)

Inspection of Equipment—At the National Restaurant Exposition, Navy Pier, Chicago.

Wednesday—May 12

Ranges—Tracy B. Madole, manager, Commercial Sales Department, Magic Chef, Inc., St. Louis, Mo.

Broilers—Merrill H. Douglas, general sales manager, Vulcan-Hart Manufacturing Co., Baltimore, Md.

Roasting Ovens—Paul Inskeep, director of sales, Detroit-Michigan Stove Co., Detroit, Michigan.

Bake Ovens (film)—Paul C. Grimes, sales manager, The G. S. Blodgett Co., Inc., Burlington, Vt.

Replace commercial gas ranges after 39 years of service

BEFORE After 39 years and more than three million meals, this battery of old Garland gas ranges was retired from St. Mary's Hill Sanitarium, Milwaukee. All top burners were still in perfect shape

AFTER Replacement was this battery of new gas ranges, equipped with automatic safety oven lighting. Cooking operations were speeded and comparative meter readings show 20-25 per cent fuel saving

Baking and Frying Demonstration—J. M. Eagen, representative, Primex Sales Department, Procter & Gamble Co., Cincinnati, Ohio.

Thursday—May 13

Calculation of Electric Cooking Costs—G. T. Hibler, Philadelphia Electric Co., Philadelphia, Pa.

Commercial Water Heating—R. N. Spear, manager, Commercial Sales, Ruud Manufacturing Co., Pittsburgh, Pa.

Warming Tables—Edward L. F. Kersch, northern representative, Duke Manufacturing Co., Riverside, Illinois.

Compartment Steamers (film)—Kurt L. Seelbach, treasurer, The Cleveland Range Co., Cleveland, Ohio.

Stock Kettles and Bulk Coffee—Fred H. Groen, Jr., vice-president, Groen Manufacturing Co., Chicago, Illinois.

Counter Appliances—A. M. Bornhofen, vice-president—Sales, Anetsberger Brothers, Inc., Northbrook, Illinois.

Coffee Makers—Edgar A. Jahn, assistant utilization engineer, American Gas Association, New York.

Deep Fat Fryers (with demonstration)—Richard T. Keating, managing director, Frying Equipment and Supply Co., Chicago.

Friday—May 14

New Developments of Food Facilities Engineering—J. E. Stephens, J. E. Stephens Associates, Detroit, Michigan.

Kitchen Ventilation—C. George Segeler, utilization engineer, American Gas Association, New York.

"How To and How Not To"—(sales skit) by David E. Young, with an ALL STAR cast.

Sales Techniques and Selling Aids—E. V. Fineran, industrial sales manager, Washington Gas Light Co., Washington, D. C.

Service and Installation—Raymond G. Juergens, assistant supervisor, Commercial Sales and Service Section, The East Ohio Gas Co., Cleveland, Ohio.

Sales Ideas—Fred A. Kaiser, Executive vice-president, Detroit-Michigan Stove Co., Detroit, Michigan.

At the end of each day's session of classes, a written examination will be held. The papers will be turned in and at a later date will be graded and returned to the students together with a certificate certifying their satisfactory completion of the school course.

The advance program has been mailed to all member companies together with the necessary registration blanks and hotel information. As these schools have been growing in popularity each year, it is anticipated that this will draw a record attendance and prompt registration is advised.

Active second week in May for industrial, commercial men

INDUSTRIAL and commercial gas men are reminded to mark these Section activities on their calendars for the second week of May.

First for industrial engineers is the National Foundry Exposition in Cleveland's Public Auditorium, May 8-14. A. G. A. will have an Information Center, booths 418-420, where industrial gas men from The East Ohio Gas Company will be in attendance during the entire show to answer questions by visitors.

For the commercial gas man there will be the giant National Restaurant Exposition on the Navy Pier, Chicago, May 10-14. Here again A. G. A. will sponsor the Combined Commercial Cooking Exhibit with cooperating manufacturers of heavy duty cooking equipment.

The huge Gas Center will span the pier from wall to wall through which the two main aisles pass thus arresting the attention of every visitor to the show. As in former years, the first day, May 10, will be reserved exclusively for dealers.

The A. G. A. Commercial Gas School which will be held in Chicago concurrently with the Restaurant Show is previewed on this and the preceding page.

Institutional investors increase gas industry holdings

BY A. G. A. BUREAU OF STATISTICS

A DECADE of prosperity, with its consequent increase in premium value of insurance policies in force, and the desire of the population to obtain professional guidance and diversity of risk in their investments, has channeled vast amounts of investable capital into the hands of insurance companies, investment companies, and mutual funds.

These so-called "institutional" investors have thus assumed increasing importance in the postwar capital markets; their attitudes toward gas utility and pipeline securities are important in analyzing the availability of funds for expansion to meet the demands of consumers for gas. These three types of organizations do not represent the entire institutional market. However, the security portfolios of such companies are available in published form (although still requiring substantial processing to derive industry totals or averages), whereas comparable statistics for pension funds, charitable foundations, and university endowment funds are not similarly available. Among the latter group, the tendency to follow the guidance of investment company decisions is probably substantial, so that analysis of holdings of these professional students of the market is particularly appropriate.

The Bureau of Statistics recently completed such an analysis of portfolios as of the end of 1952 and 1951. The results are shown in the accompanying table. (Data for 1953 holdings, particularly for insurance companies, will not become available for some months.) It is apparent that the attitudes of investment companies toward the gas utility and pipeline industry, as measured either by dollar value of holdings or percent of industry securities held, improved during 1952. Total investment in gas industry securities by these companies increased 51 percent during this single year.

INVESTMENT COMPANY[a] AND INSURANCE COMPANY HOLDINGS OF STRAIGHT GAS UTILITY SECURITIES

(HOLDINGS STATED AT BOOK VALUE IN THOUSANDS OF DOLLARS)

	Amounts (000)			Percent of Industry Outstanding Securities Held by		
	Investment Company	Insurance Company	Total	Investment Company	Insurance Company	Total
December 31, 1952						
Long Term Debt	$ 24,577	$2,707,477	$2,732,054	0.5	59.0	59.5
Preferred Stock	42,187	88,813	131,000	8.3	17.6	25.9
Common Stock	96,679	37,372	134,051	6.5	2.5	9.0
Total	163,443	2,833,662	2,997,105	2.5	43.0	45.5
December 31, 1951						
Long Term Debt	19,480	2,400,329	2,419,809	0.5	64.6	65.1
Preferred Stock	28,008	69,191	97,199	7.2	17.6	24.8
Common Stock	60,452	40,123	100,575	4.6	3.1	7.7
Total	107,940	2,509,643	2,617,583	2.0	46.3	48.3

[a] Including mutual funds.

On the other hand, although insurance companies increased the dollar volume of their holdings, the proportion of outstanding industry securities which were included in their portfolios declined from 46.3 percent to 43.0 percent. The detailed statistics follow.

It was originally anticipated that these summaries would be a by-product of an individual listing of gas companies, indicating for each company the proportion of its securities held by such institutional investors. Such a listing was prepared for 1952 under the sponsorship of the A. G. A. Committee on Economics, and was submitted to the chief financial officer of each gas company included on the list to determine the usefulness and value of such studies, especially in the light of the time and expense involved in their preparation.

The consensus was that, although the information was interesting, its limited value to specific companies did not warrant its compilation in the future. It is nevertheless valuable to know that such data can be obtained, when and if desired, by reference to "Corporate Holdings of Insurance Companies" (United Statistical Associates, Inc., New York, N. Y.) and "Guide to Investment Trust Portfolios" (Vickers Brothers, New York, N. Y.).

Marks centennial

CITIZENS OF MONTGOMERY, Alabama, went to a birthday party not long ago—to celebrate the centennial of the Alabama Gas Corporation. To spark the festivities, open house was held in the utility's brand new office building for four days, from February 17-20.

Refreshments were served by the home service staff, dressed in costumes of the 1850's, as Alabamans visited the new building and examined an exhibit of old pictures and historically interesting papers. Included in the exhibit were photostats of the company's franchise to build a gas plant and distribute manufactured gas for lighting purposes.

Since those early days, visitors saw how the company has enjoyed steady growth, and how well it serves its 27,584 meters today. In particular, records for the last 20 years showed a tremendous surge of activity.

The complete story of the gas company's open house, its history, progress and present place in the community was told in a special section of Montgomery's daily newspaper, the *Advertiser*, on February 17.

Plan Navy Pier cooking exhibit

Committee on Displays at National Expositions meets in New York to allocate space to cooperating manufacturers in the A. G. A. Combined Commercial Cooking Exhibit at the National Restaurant Exposition, Navy Pier, Chicago, May 10-14. Clockwise around table: Lewis Barry, Lewis Barry Trade Show Exhibits; M. A. Combs and Hayes S. Walter, A. G. A.; Al Hess, Detroit-Michigan Stove Co.; C. L. Nelson, Chairman, Central Illinois Electric & Gas Co., Rockford, Ill.; C. F. Sevenoaks, Consolidated Edison; R. L. McVicker, Groen Mfg. Co.; Frank Drohan, Cleveland Range Co. and Anetsberger Bros., Inc.

Accent on action

(Continued from page 28)

covering the design, construction and operation of gas pipelines. Moreover, legislation has been introduced in Congress which would give the Federal Power Commission the authority to regulate construction of interstate pipelines.

If this situation were to continue, the gas industry would face the danger of a vast complex of different and perhaps conflicting regulations pertaining to pipeline practices.

Consequently, American Gas Association has asked American Society of Mechanical Engineers to review the present piping code with the objective of developing a code that would satisfactorily meet present-day requirements.

This work is now in the hands of a 72-man committee including many outstanding experts in gas transmission and distribution. New England is represented on the committee preparing the new standard by J. A. Bramblett of the Fall River Gas Works Co., Professor Harry Udin of M.I.T. and B. C. White of Stone & Webster Engineering Company.

Work on this new Transmission and Distribution Piping Code is positive proof that the gas industry is regulating its own safety.

Let's take a look at another aspect of our safety record. Did you know that according to National Fire Protection Association's report on building and fire losses for 1952, the classification "gas and gas appliances" had the best fire safety record of all fuels used to heat, light and serve the home?" We stood eighteenth on the national list of 24 causes of fires in 1952.

How many of you know that, according to National Safety Council figures, it is 37 times more dangerous to ride in an automobile than to use gas in any type of appliance? Assuming that you die by accident, the odds are 15 to one that you will get killed by a fall rather than be asphyxiated by gas or vapor of any kind at home or at work.

Similar figures proving the safety of gas burning appliances could be cited almost without end. Nevertheless, dealer representatives in many areas of the country report noticeable sales resistance stemming from fear of gas.

The Public Information Bureau of A. G. A. is supplying regional and local organizations with facts and figures to counter this resistance. Numerous articles are being produced for newspapers, national magazines and industry outlets on gas industry progress in safety, along with developments in other fields. On February 5, the A. G. A. Board of Directors authorized additional public relations activities to tell the story of the safety and convenience of gas service.

But we must not forget our employees. Here too we are making gains. The number of disabling injuries to employees has dropped from nearly 22 per million manhours in 1947 to slightly more than 14 per million manhours in 1952. Despite this obvious improvement, we're still thirty-second on the list of 41 industrial groups in the nation. Based on 1952 industry experience, the A. G. A. Safety Consultant estimated recently that direct and indirect costs of employee accidents lost the gas industry in the neighborhood of 22 million dollars in 1952.

It is encouraging to note, however, that more than 90 member gas companies effected at least a 25 percent reduction in employee accident experience during that same year, 1952. For this achievement, they received special A. G. A. awards. In order to bring about still greater improvement in the industry's employee safety record, the Accident Prevention Committee of A. G. A. is preparing a series of comprehensive safety courses for regional use throughout the country.

Much remains to be done on determining the causes of employee accidents and near accidents. It is now up to top management in each company to put the final accent on action by eliminating all unsound operating practices.

I cannot close this talk without making special mention of the A. G. A. Laboratories, the gas industry's guardian of safety and dependability. Last year, the Laboratories put more than 4,500 individual gas appliance models and accessories through exhaustive tests to determine their safe operation and efficiency.

More than 30 million American families who use gas appliances bearing the A. G. A. Seal of Approval are now protected through a recent decree of a U.S. District Court in San Francisco. This important legal victory prevents unauthorized use of the Seal of Approval. The decree protects current users of gas appliances and at the same time safeguards the interests of future gas industry customers who purchase about six million gas appliances each year.

Six million appliances a year may sound impressive. However, the A. G. A. Bureau of Statistics, which is completing studies of national sales potentials of various gas appliances, informs me that we can increase that number—that we can sell nearly *59 million* gas ranges, gas water heaters and gas heating units during the five year period 1954-1959, if economic conditions remain at current levels—AND IF WE KEEP OUR COATS OFF FOR ACTION!

I believe that we can reach that goal only through the combined efforts of all national, regional and state gas associations. In line with this thinking, the A. G. A. Board of Directors has passed a special resolution commending regional and state affiliated organizations and the Gas Appliance Manufacturers Association for their effective cooperation in industrywide programs.

This resolution notes in part that "the gas industry can be served more fully through further cooperative action by all elements of an industry in aggressive, forward-looking programs of promotion and development."

I hope you are convinced, as I am convinced, that the gas industry has placed the *accent on action*. Our primary task now is to continue to upgrade our sales offensive!

In conclusion, I suggest that in our efforts to forge a modern gas industry we all join a new generation of Minutemen —business statesmen of the highest caliber. We must not relegate ourselves, as the diplomats often do, to splitting hairs while scientists are splitting the atom. Our future lies in fusion—in a united industry; not in fission.

Locally, regionally and nationally, we must make Gas Industry Development a chain reaction!

Standards—a tool

● Standardization is one of the tools we can and must use to maintain our economic stability, to further our dynamic growth, to preserve our national resources, and to insure our national security. It is not the only tool we can use. It is possibly not the most important one. But I do know this: we shall do very badly for ourselves and our children if we do not now make the fullest possible use of voluntary national standards in meeting the problems of our economy and our country in the crucial years ahead.—G. F. Hussey, Jr., managing director, American Standards Association.

Production conference program set

A. B. Lauderbaugh (above) and J. W. Carroll, respectively, will preside over chemical, production sessions

C. F. deMay, Columbia Gas System (above), and K. B. Nagler, Peoples Gas, Chicago, are listed as speakers

Some 600 chemists, chemical engineers and manufactured gas production men are expected to gather at the Hotel William Penn, Pittsburgh, for the Operating Section's Chemical, Engineering and Manufactured Gas Production Conference, which opens May 24.

For three days they will consider the latest developments in these fields, the accompanying problems and obstacles, and the steps being taken to solve or overcome them. Reviews of past advances will be mixed with previews of future attainments to be gained through research. Papers, open discussions and round-table conferences will adhere to the pattern set in previous years for one of the most stimulating and beneficial conferences on the A. G. A. calendar.

A. B. Lauderbaugh, The Manufacturers Light and Heat Co., Pittsburgh, chairman of the Section's Chemical and Engineering Committee, will preside at the chemical session and two general sessions. J. W. Carroll, Philadelphia Electric Co., Philadelphia, chairman of the Manufactured Gas Production Committee, will preside at the other general session and at the session devoted to production.

The first general session will open with a report on the Section's activities by its chairman, F. J. Pfluke, Rochester Gas and Electric Corp., after which Karl B. Nagler, The Peoples Gas Light and Coke Co., Chicago, will discuss the broad topic "Reflections on the Gas Industry and Our Jobs in It". Three technical papers will follow. Frank E. Costanza, The Manufacturers Light and Heat Co., Pittsburgh, will discuss the fundamentals of plant testing for corrosion; Ralph L. Coryell, Consolidated Edison Company of New York, will review the types of equipment required for testing odorization. Continuous production of natural gas substitutes by complete gasification of light distillates will be reported on by H. R. Linden, W. G. Blair and E. S. Pettyjohn, all of the Institute of Gas Technology, Chicago.

The annual report of the Builders' Subcommittee, reviewing the latest innovations in gas plant equipment and processes, will be given by the subcommittee chairman, T. M. Gilbert, Cutler-Hammer, Inc.

Research will be the primary topic at the first afternoon's general session. T. L. Robey, A. G. A. coordinator of research, will review the Association's research program under the PAR Plan, after which the Institute of Gas Technology will present three papers.

Production of natural gas substitutes by pressure hydro-gasification of oils will be discussed by H. R. Linden, J. J. Guyer, and E. S. Pettyjohn. Appliance tests on the substitutability of high Btu oil gas for natural gas will be discussed by E. F. Searight, J. Boyd, R. Parker and Mr. Linden. A report will be presented on the present status of research on pipeline gas from coal by Mr. Pettyjohn, H. A. Dirksen, E. J. Pyrcioch, and C. G. von Fredersdorf. These men are all on the staff of IGT and actively engaged on the research programs connected with these subjects.

Final paper of the session will concern production of high Btu gas with the TPC process, presented by T. F. Loughry, Surface Combustion Corporation.

The general session on the third morning will open with a discussion of corro-

The Program Committee, at its meeting in New York last November to develop the program for the Operating Section's Conference next month in Pittsburgh, consisted of the chairmen and vice-chairmen of the Chemical and Engineering and Manufactured Gas Production Committees and subcommittees

sion in water sealed gas holders by W. K. Beard, Philadelphia Gas Works Division of the United Gas Improvement Company, after which R. W. Gilkinson, Rochester Gas and Electric Corp., will consider deposit recorders for plant operation control. "Sensible Smoke Control" will be the subject of a paper by the director of Pittsburgh's Bureau of Smoke Control, T. C. Wurts.

R. B. Paquette, The Peoples Gas Light and Coke Co., Chicago, will present a compilation of tar dehydration methods which have been found useful in the recent past or which are currently in use by representative companies. Three members of the staff of the U. S. Bureau of Mines, John B. Gayle, W. H. Eddy, and John A. Brooks, will then report on a bureau study on coal expansion, covering the fundamental relation between measured gas and wall pressures, and the factors influencing pushing pressure and slot-type oven.

This third general session will conclude with a final report by IGT, when Mr. Pettyjohn discusses the influence of coal, petroleum, oil shale and natural gas resources on production planning.

The morning of the second day of the three-day conference will be devoted to two parallel sessions, on chemicals and manufactured gas production.

R. B. Segur, Koppers Co., Inc., will present a paper on the controlled cooling down of by-product coke ovens to minimize damage, following which E. E. Richardson, Cambridge Gas Light Co., Cambridge, Mass., will discuss regenerative oil gas sets. The problems of the small operators, and how liquefied petroleum gases may solve some of those problems, will be considered by C. M. Swan, Pennsylvania Gas Management Company. LP gases will be further considered by Dean Seifried, Rockland Light and Power Co., and Henri V. Precheur, Public Service Electric and Gas Co., Newark, N. J., in a joint paper on the design and development of LP utility systems. E. R. Griggs, also of Public Service, will close the session with a report on experiences with the cyclic catalytic reforming set at Paterson, N. J.

The chemical session will open with a report on the work of revising the Code for Pressure Piping, ASA B31. C. F. de-Mey, Columbia Gas System, will discuss the procedures under which Subcommittee No. 8 of the B31 Sectional Committee, was organized and functions. Mr. de-Mey is a vice-chairman of Subcommittee No. 8 and chairman of one of its subgroups. N. A. Manfred, Chicago District Pipeline Co., will discuss natural gas measurement for the gas plant. The final paper will be on the practical problems of odorization, by George G. Dormer, The Manufacturers Light and Heat Company.

A total of nine informal luncheon-afternoon sessions have also been scheduled for the conference. Beginning at noon on the second day, sessions will be devoted to carbonization and coke, use and handling of LP gases, quality control, odorization, and large volume measurement. On the third day, the luncheon sessions will consider high and low Btu gases and plant waste disposal.

Complete details on the conference will be included in the advance program which will be sent to all Section members in the near future. Headquarters for the conference is the Hotel William Penn. Requests for accommodations should be sent direct to the hotel, using the hotel reservation card which will be included with the advance program. Delegates are also urged to register in advance by mail, using the form which will be sent to them.

Southerners break gas refrigerator sales records

HOW CAN I get that electric refrigerator out of the kitchen and replace it with a new gas refrigerator?" That's a question every utility sales manager is constantly asking. An effective answer has been worked out by several utilities and gas refrigerator manufacturer, Servel, Inc. Tested in several sections of the country, this plan is detailed in the February issue of Servel's *Idea Exchange*.

R. P. Hill, general sales manager of Mid South Gas Co., Little Rock, Ark., reports, "We found that nearly every one of our customers who could afford to purchase a refrigerator already owned a good electric unit. In fact, the majority of them had electric units less than five years old. They were reluctant to trade these units on a gas refrigerator unless they could receive something near the actual value of the trade-in."

The first step was to reverse the company's policy of junking trade-ins in favor of a policy of offering trade-ins based on the age of the refrigerator. Allowances figured this way were startling . . . nearly new electric refrigerators were traded for gas models. Sales proved that if owners could get an allowance near the actual value of their electric refrigerators, they would be glad to trade for gas. National advertising and publicity had sold the public on gas . . . and a realistic trade-in offer made it possible for them to buy. The plan proved profitable for the company after the revolutionary decision was made to *sell the trade-ins*.

To the hue and cry that a gas utility was selling electric refrigerators, Chattanooga Gas Company explained, "Each sale of a new Servel refrigerator replaced electric with gas."

Another sales manager offered the opinion that if the utility had not sold the electric trade-in, someone else would have. Now the buyer of the trade-in is on the gas company's list . . . and a prime prospect for the wide awake salesman to follow up for future gas conversion.

Supporting newspaper ads and window displays in Chattanooga excited a great deal of favorable comment. To Joe Pahle, advertising manager of this gas company in the heart of TVA, the promotion proved a powerful sales tool . . . visible demonstration that many owners of practically new electric refrigerators *preferred gas*.

Gas supply men

(Continued from page 23)

code on pressure piping for the gas industry.

Final event on the general sessions program was an exposition on "Chemicals from Gas, Petroleum or Coal" by Dr. R. L. Bateman and T. R. Ragland, Carbide and Carbon Chemicals Co., New York, N. Y. Dr. Bateman delivered the speech.

"Looking to the near future, the production of natural gas will expand with a concurrent greater availability of potentially recoverable ethane," he remarked. "For the next five years the ratio of ethylene for chemical manufacture derived from natural gas to that of ethylene from petroleum raw materials is likely to remain unchanged.

"Based upon total gas production and ethylene consumption for chemical manufacture in 1960, as estimated in the Paley Commission report, it appears that only 5.7 percent of the potential ethane recoverable from natural gas will be employed for manufacture of chemicals compared with the 3.8 percent today. Another trend which will become evident in the next 10-20 years is the gradual return to coal as an increasingly important source of carbon and hydrogen for the synthesis of organic chemicals," Dr. Bateman declared.

Three excellent gas industry films were shown each afternoon at the end of the luncheon conferences: "This Is Your Line" (in three dimensions) by H. C. Price Corp.; "River in the Way" by Columbia Gas System, Inc., and "Natural Gas" by Southern Gas Association.

(Following is a series of brief resumes of the informal luncheon conferences held during the A. G. A. meeting in New Orleans.)

Communications conference

H. A. Rhodes, Transcontinental Gas Pipe Line Corp., vice-chairman, A. G. A. Communications Committee, presided.

Panel members were J. E. Keller, Dow, Lohnes and Albertson; L. I. Duthie, El Paso Natural Gas Co.; J. W. Flint, Cities Service Gas Co., and T. G. Humphreys, Jr., Alabama Gas Corporation.

J. E. Keller clarified the API Central Committee on Radio Facilities relationship with the FCC. Mr. Keller also outlined the effective use being made of radio in the gas industry, emphasizing the tremendous growth of these facilities resulting in considerable congestion in certain areas on mobile frequencies. This has created a need for additional mobile channels which could be partially accomplished by splitting present 40 KC channels into 20 KC bands in the 30-50 KC region or fully accomplished by the allocation of additional frequency by the FCC.

Mr. Keller pointed out that present congestion could be reduced on frequencies shared by several users if improved operating procedures were adopted. Considerable emphasis was placed on the leadership of the petroleum industry in developing microwaves, outlining the recent request from the FCC that the petroleum group initiate studies looking toward the formulation of permanent rules for microwaves.

Mr. Flint detailed the present position of industry's extensive privately owned wire line communication systems. He emphasized recent developments, such as companders and noise suppressors for improving circuit quality particularly with reference to cross talk, induction interference, and general noises caused by circuit unbalances. Mr. Flint also commented on present day pole line construction costs, and the use of commercial communication facilities.

Mr. Duthie summarized his company's experience with microwave systems in both the 2000 and 6000 MC bands. He called attention to his installations which operated satisfactorily for his company without standby microwave equipment.

Standby power service is required due to the remote location of many installations. Mr. Duthie emphasized that the 2000 MC installation was justified on the basis of their telemetering requirements with the usage of the voice circuits being corollary. Outages on the system were largely a result of delay in repair personnel reaching trouble.

Mr. Humphreys commented in some detail on mobile radio saturation in certain areas, such as exists in the petroleum industry along the Gulf Coast and in the utility service in the New England area. Mr. Humphreys stated that NCUR favors 20 KC channeling, provided this was implemented in an orderly fashion.

He also described the fee system which is proposed by FCC to assist indirectly in defraying that body's expenses. Also, mention was made of present proposals by some car manufacturers to change from six to 12 volt ignition systems and the effects of this on mobile units.

Additional comments were made on the desirability of private ownership of VHF systems since only under these conditions could full control of facilities remain with the operator.

General discussions were held on mobile systems emphasizing various requirements for connecting the "on off" switch through or ahead of the ignition switch, the use of heavy duty generators and alternators as contrasted with standard auto generators or low speed cut-in generators provided by automobile manufacturers, and the various methods of converting present six volt units to operate on 12 volts.

A lengthy discussion developed on microwaves, particularly the various methods of modulation with the consensus being that there was little difference in the two methods utilized—some comment was had on methods of handling spare parts, either in stores or direct chargeout of material as received. Grounding of microwave towers demanded considerable attention with anodes versus common bonding of all component units being explored.

Comments were exchanged on the group's need for commercial VHF service using com-

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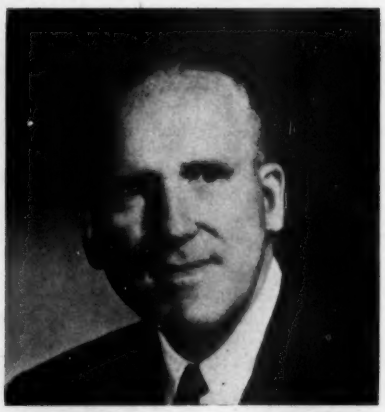
Complete link to supplement gas supply

Construction of Philadelphia Electric Company's dual 16-inch Schuylkill River Crossing provides link of additional transmission mains to supply fast-growing Delaware Valley. Fulghum Contracting Corporation and United Engineers & Constructors Inc. completed construction near Conshohocken this winter

Better selling paramount problem
at Eastern and Mid-West Regional gas meetings

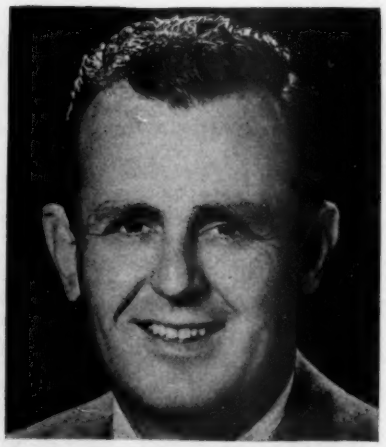
Sales leaders to swap ideas

J. C. Berwanger, Columbus, Eastern Sales Council chairman, will deliver opening address



J. Theodore Wolfe, industry leader, Baltimore, will review Development Program progress

T. H. Evans will be chairman of Tuesday morning meeting and member of Pittsburgh Story panel



W. H. Gove, nationally known sales speaker, will advise conferees to "Serve and Sell"

Eastern Natural Regional Gas Sales Conference

How-to-do-it discussions will be a new feature added to the 1954 program for the Eastern Natural Gas Regional Sales Conference sponsored by the Residential Gas Section, American Gas Association, at the William Penn Hotel, Pittsburgh, April 19 and 20. To provide an interchange of ideas and methods in the promotion and sales of gas appliances, a series of round-table discussions will be held each afternoon with well-qualified sales executives as moderators. Delegates attending the conference are invited to report their own company experiences or to participate in the question-and-answer session.

The conference will open April 19 with a brief address by J. C. Berwanger, The Ohio Fuel Gas Co., Columbus, current chairman of the Eastern Natural Gas Regional Sales Council. J. Theodore Wolfe, executive vice-president, Consolidated Gas Electric Light & Power Company of Baltimore, will report on the progress of the Gas Industry Development Program. As chairman of the committee which created and put into operation this great promotional effort of the gas industry, Mr. Wolfe has specific ideas on what must be done to increase the gas loads.

"Revolution and Revenue in the Laundry", is the title of a dramatic presentation offered by C. E. Bartlett, Ruud Manufacturing Co., Philadel-

phia, and Mrs. Amber Ludwig, equipment editor, *What's New In Home Economics* Magazine, New York. The skit will demonstrate the value of an all-gas kitchen and laundry as a vehicle for promoting sales of gas. J. M. Townsend, Servel, Inc., Evansville, Ind., will speak on market potentials, competitive efforts and other factors needed in building a profitable gas all-year air conditioning load. A new colored sound-slide film designed to bring to dealers the national advertising and promotion helps as well as other developments to help him reap the profits inherent in sales of gas appliances will be shown at the closing of the morning session.

At the afternoon session, three consecutive round-table discussions will be staged. James E. West, Washington Gas Light Co., will lead a panel group devoted to gas all-year air conditioning. A second panel will discuss gas house heating under leadership of Frank C. Curro, The Brooklyn Union Gas Company. A third group will devote its attention to gas incineration, with George F. Duggan, The East Ohio Gas Co., Cleveland, serving as moderator. These groups will convene at 2:00 p.m.

At 3:00 p.m. the moderators and the topics will change. James O. Nichols, Philadelphia Gas Works, will head a discussion on selling through the dealers. Roland C. Cramer, McCann Erickson, Inc., account executive on the A. G. A. national advertising account, will moderate a panel meeting devoted to advertising as a key to sales. The third round-table discussion will discuss water heating under leadership of Charles L. Yost, The Peoples Natural Gas Co., Pittsburgh.

Thomas H. Evans, Equitable Gas Co., Pittsburgh, will serve as chairman at the meeting Tuesday morning. Gas refrigeration sales techniques will be outlined by Vernon F. Stanton, South Jersey Gas Co., Atlantic City. Christy Payne, Jr., The Peoples Natural Gas Co., will report to the conference results achieved by one of the ten "action demonstration" cities selected to test the Gas Industry Development Program. This will be one of the first of such reports.

Pittsburgh offers a unique situation

(Continued on page 56)

A. G. Bur, Wisconsin Public Service Co., will chair Midwest Regional Gas Sales meeting

Eskil I. Bjork, president, Peoples Gas Light and Coke, Chicago, will be keynote speaker

Mid-West Regional Gas Sales Conference

Panel discussions, demonstrations, inspirational talks and dramatic skits will be offered to more than 700 delegates expected to attend the twenty-seventh annual Mid-West Regional Gas Sales Conference at the Edgewater Beach Hotel in Chicago, April 26-28. The conference is sponsored by the Residential Gas Section of American Gas Association.

Eskil I. Bjork, president, The Peoples Gas Light & Coke Co., Chicago, will give one of the keynote speeches. He will stress the need for strengthening selling activities of gas utilities. A new feature at the conference will be offered in the form of a panel discussion on gas house heating. The panel will be comprised of a contractor, a distributor, a manufacturer and a utility representative. H. D. Valentine, coordinator of the conference, will act as moderator.

It is anticipated that a panel discussion on gas cooking will follow the space heating discussion. Four executives from gas range manufacturing companies will make up the panel. A gas utility sales executive will lead the discussion on sales and promotional techniques used in the industry.

Elmer Cone, Elmer Cone Co., Kansas City, Mo., will give a presentation on gas incinerators. The importance of relating gas appliances to new homes will be stressed by George Arquilla, president, Metropolitan Home Builders of Chicago.

A dramatic skit on the load building potentialities of the modern gas home laundry will be staged by C. Edwin Bartlett, Ruud Manufacturing Company. The skit will feature Dr. Elaine K. Weaver, Ohio State University, who has established a national reputation for her knowledge of problems connected with home laundries.

As a high inspirational note in the conference an address will be given by H. Roe Bartle. Stanley C. Gorman, A. G. A. field representative, has reached back into his experiences as former promotional director for the Court of Flame gas water heater campaign for inspiration for his lively skit: "Torrid Tessie—the Hottest Thing in the Gas Industry".

Last month more than 150 gas industry and gas appliance executives were given a preview of some dramatic new developments in gas ranges at the Cleveland A. G. A. Laboratories. New types of burners, pilots, valves and ovens were presented and received great acclaim. Edwin L. Hall, director of the A. G. A. Laboratories, will present these new developments to delegates at the Mid-West Conference.

Research is not the only field in which the gas industry has made great strides. Walter H. Kurdelski, Michigan Consolidated Gas Co., Grand Rapids, currently chairman of the A. G. A. Residential Gas Section, will bring the conference up to date on A. G. A. promotion and advertis-

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Industry news

Boothby announces Convention plans

REMEMBER THE DATE: October 11-13. Remember the place: Atlantic City, New Jersey. Then you'll not forget American Gas Association's thirty-sixth Annual Convention!

Basic plans for a general sessions program embracing regulation, legislation, natural gas future prospects, supervisory training and increasing costs of natural gas were outlined recently at a meeting of the General Convention Committee in New York City. Everett J. Boothby, president, Washington Gas Light Co., and chairman of the committee, has announced that although the Gas Appliance Manufacturers Association will not hold an exhibit during this convention, three General Sessions, a meeting of the Residential Gas Section and the entertainment features will be held at the Auditorium.

The Chalfonte-Haddon Hall Hotels will be designated as headquarters for the General Management and Accounting Sections and meetings of those sections will be held there. The Shelburne Hotel will be the headquarters of the Industrial and Commercial Section, but meetings of that section will be held in the Dennis Hotel. The Dennis Hotel will serve as headquarters for the Residential Gas Section, and its one meeting will be held in the Ballroom of the Auditorium. Headquarters for the Operating Section will be at the Claridge Hotel, which will hold its three sessions in Trimble Hall at the Claridge.

Louis R. Quad, Public Service Electric & Gas Co., Newark, N. J., is serving as chairman of the Convention Entertainment Committee. Tentative plans include the President's reception and ball on Monday evening; a Ladies' Party and Reception on Tuesday afternoon and a program of entertainment on Tuesday evening.

Mr. Boothby is being assisted in the planning of the General Convention program by: L. A. Brandt, vice-president, The Peoples Gas Light & Coke Co., Chicago; Norman B. Bertolette, president, The Hartford (Conn.) Gas Co.; C. L. Brockschmidt, vice-president, Texas Eastern Transmission Corp., Shreveport; A. W. Conover, president, Equitable Gas Co., Pittsburgh; C. H. Guefffroy, president, Portland (Oregon) Gas & Coke Co.; and William G. Hamilton, Jr., president, American Meter Co., Philadelphia.

Also serving on the General Convention Committee are: H. Whitcomb Nicholson, general superintendent, distribution, Public Service Electric & Gas Co., Newark; Dale Parker, secretary, The Columbia Gas System, Inc., New York; R. M. Power, executive vice-president, The Gas Service Co., Kansas City, Mo.; William G. Rogers, president, The East Ohio Gas Co., Cleveland; and Michael E. Shea, Lynchburg (Va.) Gas Company. K. R. Boyes, secretary, A. G. A., will serve as committee secretary and convention manager.

Messrs. Boothby, Bertolette and Rogers comprise a subcommittee to prepare a program of speakers for the General Sessions. It is proposed that in addition to addresses by the presidents of A. G. A. and GAMA, the program will include five other speakers of national stature.

Applications for hotel reservations were mailed to the entire membership of A. G. A. on March 12th. Registration fee will be $15, with ladies other than company employees free. All reservations will be processed in the order in which they are received by the able housing bureau connected with the Atlantic City Convention Bureau.

New York company petitions to supply natural gas

CONSOLIDATED Edison Company of New York, Inc., has requested the state Public Service Commission for authority to substitute natural gas for mixed gas currently supplied 670,000 consumers in Manhattan and 430,000 consumers in the Bronx. The company estimates that the changeover will result in annual savings of $4,700,000 in operating expenses once it is complete.

Natural gas is presently supplied to the company's customers in some sections of Westchester and Queens.

The company will complete the conversion at an estimated cost of $22 million in the Manhattan and Bronx areas affected. It will take four years to complete the changeover, beginning in September, if the company's plan is approved by the regulatory commission.

Mid-West group elects Cunningham president in Des Moines

OUR COMBINED initiative, abilities and support are required to combat the powerful competitive forces working against us. I am sold on the idea that we must plan today . . . for many years ahead in our advertising, promotional and research programs."

These were the words of Earl H. Eacker, president of American Gas Association and of The Boston Consolidated Gas Company at the forty-ninth annual meeting of the Mid-West Gas Association. The meeting, held in Des Moines from March 15-17, also featured as speakers such other outstanding industry leaders as E. E. Baxter, general commercial manager, Central Electric & Gas Co., retiring president of the regional association; Edwin L. Hall, director of the A. G. A. Laboratories in Cleveland; Carl Sorby, vice-president of Geo. D. Roper Corp.; James Donnelly, vice-president in charge of sales, Servel, Inc., and Sheldon Coleman, president of Coleman Co., Inc. and of the Gas Appliance Manufacturers Association.

During the meeting, M. B. Cunningham was elected to succeed Mr. Baxter as president of the association. Mr. Cunningham who served as first vice-president during 1953, is employed as superintendent of gas distribution, Iowa Power and Light Co., Des Moines. M. K. Wrench, superintendent of gas operation, Metropolitan Utilities District, Omaha, was elected first vice-president and George B. Johnson, assistant vice-president, Minneapolis Gas Co., was chosen as second vice-president.

New officers of Mid-West Gas Association confer at annual meeting in Des Moines, March 15-17. They are (l. to r.): M. B. Cunningham, Des Moines, president; M. K. Wrench, Omaha, first vice-president; George Johnson, Minneapolis, second vice-president and Harold Peckham, St. Paul, secretary-treasurer

Secretary-Treasurer Harold Peckham, gas superintendent of Northern States Power Co., St. Paul, reported the sound financial condition of the association during the year, and also revealed that the membership has reached a new high of 551 individual members. The association is affiliated with A. G. A.

Trash can to garden . . . . .

a PAR activity

FLOWERS in place of filth and flies will keynote the national gas incinerator sales campaign sponsored in June and July by the American Gas Association.

Campaign sales theme is designed to encourage consumers to "go from garbage can to garden—with gas." Suggested promotions include spring garden contests to be judged by garden clubs in the autumn.

Gas incinerator production has been increasing steadily, climbing from six manufacturers in 1951 to 21 at present. Greater numbers of gas utilities are advancing sales of incinerators which build a steady, even gas load averaging 13 therms monthly throughout the year.

Advertising in support of the incinerator campaign will be aimed at home builders and contractors through *House and Home, Architectural Record* and *American Builder*.

Other incinerator promotion aspects include dealer door-openers such as zinnia and marigold seed packets and giveaways including plastic fly swatters. The horticultural promotion theme can be furthered through dealer and utility sales cooperation with local florists to offer plant and shrubs as sales premiums for incinerator purchases.

Additional avenues of promotion are dealer and utility tie-ins with local clean-up, fix-up campaigns in swing with spring cleaning.

Promotion pieces are highlighted by a 12-part display kit comprising pennants, jumbo price tags, streamer and poster. Other sales literature includes the "Big 10" and salesmaker booklets on incinerators, plus giveaways and premiums described in the "1954 Catalog of A. G. A. Promotion Aids," all of which can be ordered from the Promotion Bureau, A. G. A., 420 Lexington Ave., New York 17.

Nashville company's holiday goodwill survives

EVEN THOUGH a good four months have passed, Tennessee small fry haven't stopped talking about the day Santa Claus came to Nashville. And the Nashville Gas Co., sponsor of the city's fabulous story-book Christmas parade, is still enjoying the goodwill and recognition earned during the holiday season, 1953.

Most exciting features of the parade were huge story-book balloon characters obtained from Giant Balloon Parades, Inc., Newark, New Jersey. Other highlights were floats prepared by local organizations such as the Fannie Battle Carol Singers, an organization which raises money for charitable purposes at Christmas time; the Big Brothers; the Catholic Youth Organization; city firemen and other non-commercial organizations whose activities are related to Christmas. Sixteen city and county high school bands, an all-star drill squad and an Army color guard also participated. The Police Department, Fire Department, Junior Chamber of Commerce, Boy Scouts, Volunteer Police and other civic organizations helped to stage the parade.

And what a parade! Over 210,000 Nashville citizens jammed the streets for the spectacle, which included Santa's sled drawn by eight reindeer and Rudolf, huge balloon characters familiar to all children: Snow White and the Seven Dwarfs; Goldilocks and the Three Bears; Moby Dick; Captain Hook; Red Riding Hood; Peter Pan and others. Santa himself, however, was unquestionably the star performer, and was greeted by an enthusiastic, shouting, tumultuous throng of youngsters! The next day, Nashville newspapers were filled with pictures and details of Santa's visit.

The parade is an outstanding example of how a local gas company can cooperate with other agencies in a community to accomplish a good result—and at the same time promote its name effectively. Terry Hart, the utility's general sales manager comments, "a great deal of planning and hard work are involved; however, it draws the biggest crowd of any event throughout the year in Nashville, and we feel that the expense and effort are justified by the recognition and goodwill which we derive."

Giant balloon figure of Papa Bear delights 210,000 youngsters and oldsters during annual gas company-sponsored Yule parade in Nashville

Personnel conference to be held in Chicago this month

LABOR LEGISLATION, business forecasts, collective bargaining and a host of other topics interesting to industrial relations executives will be discussed at the Sixth National Personnel Conference in Chicago. The meeting will be held on April 15-16 under the auspices of the General Management Section of American Gas Association. Joint sponsors are the A. G. A. Personnel Committee, Great Lakes Personnel Conference, A. G. A. Midwest Personnel Conference and Southern Gas Association Employee Relations Section.

Program speakers include: Elmer Ramsey, assistant vice-president, Laclede Gas Co., St. Louis; Howard B. Noyes, senior vice-president, Washington Gas Light Co., and chairman of the A. G. A. General Management Section; Dr. Charles Roos, president, Econometric Institute, New York; Dr. Frederick Harbison, professor of industrial relations, University of Chicago.

Also, Dean H. Mitchell, president, Northern Indiana Public Service Co., and second vice-president, American Gas Association; Dr. Rensis Likert, professor of psychology, University of Michigan; Dr. Robert Fleming, director, Institute of Labor and Industrial Relations, University of Illinois, and Karl B. Nagler, vice-president, The Peoples Gas Light and Coke Co., Chicago. Dr. Leon Bosch, assistant dean, school of commerce, Northwestern University, will speak at the closing luncheon meeting on Friday.

Gas appliance washes and dries laundry in one operation

A NEW GAS appliance, a combination laundry unit that dries as well as washes in one continuous automatic operation, has been introduced by Bendix Home Appliances Div., Avco Manufacturing Corporation.

Called the gas duomatic, the new appliance's drying method is similar to that used in Bendix gas dryers using low heat and high air flow. Room air is drawn into the unit, heated, passed through the clothes and exhausted outdoors.

Requiring no more installation than a separate automatic washer and gas dryer, the combination unit is but 36 inches wide and occupies less than a square yard of space. The easy-to-clean lint trap is readily accessible through a hinged door in the porcelain top panel.

The new gas appliance can wash and dry an average eight-pound mixed load in about an hour. It is operated by two simple controls and a water temperature selector switch which governs a booster heater which makes wash water hotter during the washing cycle only, and at the option of the user.

The unit can be used separately as either an automatic washer or an automatic dryer.

The gas burner is ignited by the automatic ignition system as the unit moves into the drying cycle. Room air is drawn into the unit and over the burner where it is heated and forced into the tumbling cylinder containing the clothes. Activating the air is a blower that gives the air a velocity of 75 miles per hour. Unless the dryer has the ability to exhaust against ordinary outside wind pressure, its efficiency is reduced and its drying time increased.

Highlights of cases before Federal Power Commission

Rate cases

● **Atlantic Seaboard Corporation**—FPC approved a settlement of rate proceeding, providing for an increase in its wholesale natural gas rates of about $4.5 million per year instead of the originally proposed $7.4 million. Rates were based on a 6¼ percent rate of return, according to the FPC. Refunds of $2.9 million will be made to wholesale customers who have been paying the rate increase which was effective under bond.

● **Kansas-Nebraska Natural Gas Company, Inc.** has filed a proposed annual increase of $694,000, or 30.6 percent, in wholesale natural gas rates with the FPC to affect five customers in Nebraska. The primary reason for the filing is the increase in the cost of purchased gas.

● **Kentucky-West Virginia Gas Company's** proposed $1,025,455 rate increase, equivalent to 21.4 percent, has been suspended by the Federal Power Commission. The increase was to affect gas sold to Equitable Gas Company of Pittsburgh, Pa., and Louisville Gas and Electric Company, serving Louisville, Ky., for resale in those areas.

● **Tennessee Gas Transmission** has received FPC approval of a proposed settlement under which Tennessee will increase its wholesale natural gas rates by about $4.8 million per year instead of by $6.5 million annually as originally proposed. Reductions in the commodity charge of the proposed rate schedules were agreed upon to yield the lower revenues. For contract demand service, the stipulated rates range from $1.80 per Mcf demand and 15.35 cents commodity in the Southern zone, to $3.10 per Mcf demand and 25.85 cents commodity in the New York zone.

Construction applications

● **El Paso Natural Gas Company** has filed an application with FPC requesting authority to construct 13.3 miles of pipeline facilities, as well as other necessary equipment, in Lea County, New Mexico. This will enable it to acquire up to 56 million cubic feet of additional natural gas per day in the Permian Basin area. The proposed construction is estimated to cost $3.3 million.

● **Iroquois Gas Corporation** has filed an application with FPC requesting authorization for the construction of approximately 24½ miles of 20-inch pipe in Erie County, N. Y. The proposed line will cost an estimated $1.5 million.

● **Northern Natural Gas Company** has received FPC authorization to complete a proposed expansion of its pipeline system, already started, to enable it to deliver additional natural gas to existing customers and to supply several new customers in the Midwest commencing next winter. The newly-authorized facilities include approximately 204 miles of main line pipe and 22,800 horsepower in main line compressor additions. Cost is estimated at $23.8 million. Additional branch lines authorized for new service will cost an estimated $14.7 million. The newly-authorized facilities permit the delivery of 114.9 million cubic feet per day. Of this amount 70 million is to be available to new wholesale customers of Northern, for distribution in more than 60 communities in Nebraska, South Dakota, Iowa (including Waterloo and Dubuque), and Minnesota.

● **Shenandoah Gas Company**—Presiding Examiner Francis L. Hall of the FPC has filed a decision, subject to review by the commission, authorizing company to construct 40 miles of pipeline from Atlantic Seaboard Corporation's facilities near Middletown, Va., through the Shenandoah Valley and Winchester to Martinsburg, Virginia. The estimated cost of the project is $1.5 million. Estimated peak day requirements of the system range from 3.0 million cubic feet in 1955 to 6.8 million cubic feet in 1958.

● **Texas Gas Transmission Corporation** has applied to FPC for authority to construct 24 miles of 16-inch pipe, a meter station and an additional 2,000 horsepower compressor unit to be installed at an existing station near Bastrop, Louisiana. Cost of the entire project to be $1.6 million. These facilities will enable Texas Gas to receive an additional 58.8 million cf of natural gas per day from its two producing subsidiaries.

● **Transcontinental Gas Pipeline Corporation** has applied to FPC for authorization to construct 421 miles of loop line and 15,600 horsepower to be installed in new and existing compressor stations. The loops would consist of about 190 miles of 30-inch line and 231 miles of 36-inch pipe. The additional facilities will enable Transco to increase its capacity to 653.5 million cf of natural gas per day. Cost of this project is estimated at $53.1 million and the company proposes to finance the project by issuance of bonds, debentures, and preferred and common stock. The facilities will permit the sale of additional 93.5 million cf per day to existing customers in the New York metropolitan area and New Jersey.

Transcontinental Gas Pipeline Company in another filing has applied to FPC for authority to build 57 miles of 30-inch and 36-inch pipeline which would parallel sections of its existing system in Louisiana, Mississippi and Alabama. Estimated cost of the new facilities is $6.5 million. New facilities will enable company to transport ten million cf of natural gas per day on a firm basis for Sun Oil Company for use in the refinery at Marcus Hook, Pennsylvania. The proposed facilities will also increase the company's sustained delivery capacity for firm service to its utility customers by ten million cf daily.

Meet in Vienna

R. W. HENDEE, president of the International Gas Union and leader in American Gas Association led the business sessions of the Union's Council when it met in Vienna during February.

Delegates of national gas organizations representing Austria, Belgium, France, Germany, Great Britain, The Netherlands, Saar, Switzerland and the United States were present and elected Bengt M. Nilsson vice-president to succeed C. W. Pilo, who resigned.

The council also reviewed the work done by the International Committee for the Development of Gas Utilization; Committee for the Standardization of Fundamental Tests for the Approval of Gas Appliances and the Dictionary Panel.

The Sixth International Gas Conference will be held in New York City during the second half of September, 1955.

Safety group discusses new course

General Management Section's Accident Prevention Committee conducts "dry run" on regional safety course that committee is preparing for utility employees. Leo R. Nuhfer, committee chairman (fifth from left), presides at quarterly meeting, which was held February 4-5 in Pittsburgh, Pennsylvania

Seattle "guesstimates"

ALL SEATTLE is asking, "When will the Federal Power Commission approve natural gas for our city?" Interest was heightened by the Seattle Gas Company during the city's recent home show. The utility booth at the show fairly shouted that "natural gas is coming," and invited visitors to guess the day that the FPC would approve the measure. Chance stubs were dropped into a drum made from an actual section of 26-inch natural gas pipeline. The winner will be awarded a Wedgewood gas range.

Space was provided for the "guesstimate", name and address, and places to check if: (1) a prospect for natural gas; (2) interested in natural gas; (3) not interested; and (4) desirous of learning more about natural gas with special attention to cooking, water heating, house heating or other uses. Prospects obtained totalled 271, with 125 interested in learning more about 376 appliances. In case of a tie, the winner will be determined by lot. Portion of the ticket for guesser to tear off and save with his or her date carried this message: "What natural gas means to you! Economy • Comfort • Cleanliness • Convenience • Speed • Safety. For Your Home—For Your Business."

Gas appliance manufacturer cited for design

Hubert Tappan, vice-president, Tappan Stove Co., accepts Academy of Color and Design's national trophy recognizing the beauty of his company's range. During testimonial dinner in Las Vegas, Edwin Bathke (left), executive secretary of the academy, aids Eleanor Holm in making the presentation, awarded annually to those manufacturers who make contributions to the field of color and/or design

Coleman predicts intensive selling ahead in new year

COMPANIES which have had no experience with buyers' markets "will find the going rough in 1954 unless they quit thinking that the world owes them a profit," declares Sheldon Coleman, president of the Gas Appliance Manufacturers Association. American industry is "coming back to a level at which there will be greatly intensified bidding for the consumer's dollar," and warned that only companies with the most efficient manufacturing and most intense and imaginative selling can hope to prosper in the days ahead.

The gas utility and gas appliance industries are staking more than a billion dollars in new pipeline construction and appliance manufacturing facilities on their belief that "Mr. Average Citizen will never give up demanding and achieving the world's highest standard of living."

Mr. Coleman said the gas industry "is well equipped for the future because it has seen front-line service in five wars, five depressions and five eras of prosperity. Most of the companies in our ranks, as well as the gas utilities, have this background. We have survived all this—and competition, too—because we have always justified our existence by studying, researching, developing products and selling our goods and services to the limit of our ability.

"These are not times for industry to rest on its old tools and dies, nor to relax its merchandising vigilance. The public is beginning to turn its mind to reconstruction of obsolete homes, schools, churches, institutions, roads and transportation. Industries that recognize and join this public crusade will prosper and help fool the peddlers of gloom, doom and boom."

Industry estimates,* he added, are that the appliance market this year will absorb 2.5 million new gas ranges, two million gas water heaters, more than 900,000 gas heating systems, over a million individual room heaters, and hundreds of thousands of gas clothes dryers, refrigerators and domestic incinerators.

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* See article on A. G. A. study of gas appliance potentials on page 11.

PG&E increases supply

WORK HAS been started on another Pacific Gas and Electric Company project—107 miles of 34-inch diameter steel pipe installations—which will result in PG&E customers having their out-of-state natural gas supply increased to 700 million cubic feet a day, before next winter.

Giant earth-digging equipment is being aimed along an 80-mile route paralleling that section of PG&E's 502-mile "Super Inch" main, which extends from the Arizona-California border to Milpitas, at the southern end of San Francisco Bay.

Industrial, commercial and residential expansions in the company's territory have been reflected in continually increased demands for more natural gas. The work just started represents the final stage of a 200-mile addition, the second major increase of Super Inch's transmission capacity. It will bring the total installation of 34-inch diameter steel pipe to 787 miles on this project.

New England company participates in exhibit

Ranges, water heaters and other gas appliances displayed by Hartford (Conn.) Gas Company attracted almost 30,000 persons who visited February Home Builders Show at West Hartford Armory

Annual reports mirror progressive year for gas industry

LIKE THE FIRST Spring flowers, annual reports "blossom" at this time of the year. Listed below are highlights from a few of these reports, reflecting the growth and prosperity of the gas industry across the nation.

• **Long Island Lighting Company** continues to serve one of the fastest growing territories in America. During 1953, 14,000 gas customers were added, high above the post-war average of about 11,000. Net income for the year was $7,732,803.

• **The Peoples Gas Light & Coke Co.,** Chicago, and subsidiaries announce a net income of $10,875,764 in 1953. An important development during the year was subsidiary Texas Illinois Natural Gas Company expansion. Today, the combined transmission capacity of Texas Illinois and another Peoples Gas subsidiary, Natural Gas Pipeline Company of America, is in excess of 500 million cubic feet per day. Significant work was accomplished on the Herscher dome underground storage project. All facilities required for the initial stage of the project's development have now been built, and the storage field was operated for several days this winter. Work is progressing to discover the cause of surface gas activity which has been evidenced in certain areas of the Herscher region since last October.

• **Seattle Gas Company** reports a bonanza year, with the second highest net revenue in its history, $402,378. The company spent $184,000 during 1953 preparing for natural gas, only a small indicator of the millions which will be spent soon after the Federal Power Commission decides which pipeline company will bring gas to the Pacific Northwest.

• **Texas Gas Transmission Corp.,** Owensboro, Ky., announces a $1,235,000 increase in its 1953 consolidated net income over last year. During the year, a $33,700,000 expansion program was completed, which increased the system's peak day capacity to more than a billion cubic feet daily. Total 1953 deliveries were in excess of 256 billion cubic feet.

• **United Gas System** reports a consolidated net income of $25,659,815. Natural gas sales were 1.03 trillion cubic feet, a result in some measure of a two-year expansion program which was completed during the year. The company also reported new peak day records established in December when deliveries exceeded four billion cubic feet. Included in the system are United Gas Corp., Union Producing Co., United Gas Pipe Line Company and Duval Sulphur and Potash Company.

• In 1953, **The Columbia Gas System, Inc.** and subsidiary company operations reached an all-time high. Total gas sales climbed five percent over 1952 and the demand is still growing. Gross revenues amounted to $232,035,000, an increase of 14 percent over 1952. Although some progress has been made in settling rate matters, Columbia reports that it did not earn a fair and reasonable return on capital investments because of low rates.

The system continues to acquire gas reserves. Columbia now has an estimated grand total of nearly 12 trillion cubic feet of proved and unproved reserves, of which 11 trillion cubic feet are proved and under contract.

• **Citizens Gas and Coke Utility,** Indianapolis, at the completion of its 103rd year of gas service, is serving 134,905 customers. Earnings for 1953 were listed at $3,339,766; gross additions to plant, property and equipment at $2,663,005; gas revenues at $8,404,831.

• **The Connecticut Light and Power Company** heralded the arrival of natural gas in its service area during 1953. Revenues of $7,196,540 for gas service reflect a promise to pass on to the consumer the saving which natural gas enabled the company to make.

• **Philadelphia Electric Company's** report reflects the growth and progress of the community served by the company during 1953. Philadelphia Electric produced and delivered more gas than in any previous year in its history. The acceptance of gas for house heating in Philadelphia continues to grow, and now one-third of the homes served use this fuel for heating.

• **Niagara Mohawk Power Corporation** reports that gas sales and revenues hit new peaks. Gas sales were 26 billion cubic feet, 18 percent above 1952; revenues were $31,077,000, or 16 percent above 1952. Almost 300 miles of gas transmission and distribution lines were added in 1953, including a 55-mile line to bring natural gas service to northern New York State.

• **New York State Electric & Gas Corporation** reports that the balance of net income available for common stock was $2.64 a share for the year ended February 28, 1954 compared with $2.47 a share for the previous 12 months.

Gross revenues were $69,587,318 for the year, compared to $64,321,066 for the 1953 period.

Gas story told

AMERICA IS TAKING another look at the gas industry—its spectacular growth is attracting the attention of financiers, industrialists, consumers and other segments of the modern community.

A chance to tell the exciting story is offered in *A New Look at the Gas Industry,* recently published by American Gas Association's Public Information Bureau.

The blue pocket-sized booklet tells, in 23 fact-packed pages, just what is making 1954 gas industry news. Included is a map of the nation's pipelines, plus summaries highlighting the background and importance of good, dependable gas service.

A New Look at the Gas Industry should be of interest to your town's leaders, newspaper and magazine editors; civic, business and women's club members; school officials. In addition, it would serve a useful purpose as background for advertising and publicity releases, as promotional material to special groups and on employee information racks in local offices and factories.

Sample copies are available free from American Gas Association Headquarters, New York City. Additional copies will be supplied at a cost of 10 cents each, including postage.

Committee plans Southwestern short course

Southwestern Gas Measurement Short Course General Committee meets in Tulsa to discuss plans for 1954 session to be held at the University of Oklahoma, Norman, April 13, 14 and 15. Committee members are (seated, l. to r.): E. C. McAninch, R. M. Scofield, W. H. Carson and C. E. Terrell. Standing: W. H. Woods, James L. Griffin, Ben F. Worley, T. S. Whitis, Pat H. Miller, chairman of the committee

New England gas group elects Wright president

ROY E. WRIGHT, director of sales, NEGEA Service Corp., Cambridge, Mass., has been elected president of the New England Gas Association. Other officers elected at the association's annual meeting in Boston on March 25-26 were: Harold E. Ayer, assistant general manager, Lynn Gas & Electric Co., first vice-president; Fred H. Faulstich, assistant vice-president, Springfield Gas Light Co., second vice-president; Otto Price, vice-president, Boston Consolidated Gas Co., treasurer, and Clark Belden, managing director, The New England Gas Association, clerk.

After conducting the elections, Mr. Belden reported on the progress made by the association during the year. He was followed by Sheldon Coleman, who spoke on "Inventory for Action". New England leaders who spoke on Thursday morning were J. L. Johnson, 1953-54 president of NEGA and vice-president of Providence Gas Co., and Earl H. Eacker, president of American Gas Association, New York, president of Boston Consolidated Gas Co., Boston, and a past-president of The New England Gas Association. (Mr. Eacker's address is printed beginning on page 16 of the April MONTHLY.)

Thursday afternoon was devoted to a panel on "Operating Factors Affecting Appliance Performance", moderated by E. G. Rhodes, president and general manager, The New Britain Gas Light Company. Panel members were: Samuel W. Horsfield, Long Island Lighting Co., Mineola; George B. Johnson, Minneapolis Gas Co.; George M. Nash, Central Hudson Gas & Electric Corp., Poughkeepsie; Dean B. Seifried, Rockland Light & Power Co., Spring Valley, N. Y., and A. Malcolm Mager, New Bedford Gas & Edison Light Company.

Otto E. Zwanzig, director of A. G. A.'s PAR Program, led the Friday morning session with a discussion "New Gas Ranges through Eight Years of Research", a study prepared jointly with T. L. Robey, A. G. A. coordinator of research.

New NEGA officers are (front row, l. to r.): Roy Wright, incoming president, Cambridge; J. L. Johnson, retiring president, Providence; Harold Ayer, first vice-president, Lynn. Back row: Fred Faulstich, second vice-president, Springfield; Otto Price, treasurer and Clark Belden, clerk, both of Boston

"Electronic Possibilities for Business" were revealed by Dr. Ronald L. McFarlan, executive assistant to the director of engineering, Equipment Engineering Division, The Raytheon Manufacturing Co., Newton, Massachusetts.

Arthur H. Motley, president, Parade Publications, one of America's top public speakers and salesmen inspired his listeners with the advice to "Use It or Lose It."

Friday afternoon was devoted to another panel, this one covering "Sales Galore in 54". Moderated by Hall M. Henry, the panel discussed such sales problems as manpower, dealers, new business expenditures, and rates. Members of the panel were: Henry A. Diekmann, The Brooklyn Union Gas Co.; Frank H. Trembly, Jr., Philadelphia Gas Works Div., U.G.I.; James D. Dingwell, Jr., Lowell Gas Co.; Frank J. McLaughlin, Haverhill Gas Light Co. and Roy E. Wright.

A.G.A. wins citation for assisting friendly countries

A CERTIFICATE of Cooperation was given to American Gas Association for "furnishing technical assistance to the peoples of friendly countries" whose representatives visited A. G. A. Headquarters in New York, its Laboratories in Cleveland, and member gas utilities throughout the United States.

The award, signed by Harold E. Stassen, director of foreign operations, was presented by the Foreign Operations Administration and the Industrial Technical Assistance Division.

World representatives visiting A. G. A. have included members of the United Kingdom Scientific Mission and English Ministry of Fuel and Power; the Australian Gas Light Co.; the Tokyo Coke Co., Ltd., and Tokyo Gas Co.; the Berlin Executive Training Study team, and French administrators studying utility industry accounting.

Course accepts students

THERE IS STILL time to enroll in Southeastern Gas Association's Short Course in Gas Technology, given each year at the North Carolina State College.

Four-week courses have been scheduled to start on March 15, April 19, May 24, June 28 and August 2. Because only 20 students will be accepted for each course, it is imperative that all persons or firms planning to send students apply as soon as possible. Further information about the course can be obtained from Edward W. Ruggles, director of the college extension division, North Carolina State College, Box 5125, Raleigh.

Many uses of gas stressed at restaurant show

Milwaukee Gas Light Company displayed complete line of commercial cooking equipment with automatic safety pilots at Wisconsin Restaurant Exposition in March. More than 8,000 persons visited the exposition, in which 60 Milwaukee chefs and caterers entered over 400 pieces for cooking awards

Dione Lucas Show wins prize in Philadelphia

"Inside Greater Philadelphia" Magazine's Award of Merit, given to Dione Lucas Television Show, is presented to Frank H. Trembly (center), director of sales, Philadelphia Gas Works Div., U.G.I., program sponsors. Harry Bortnick, publisher, made award in presence of J. O. Nichols, gas works sales manager

CO_2 removal plant operating

PERMIAN BASIN Pipeline Company's three million dollar carbon dioxide removal plant in Pecos County, Texas, has been completed and is now in operation.

This marks the completion of the entire $42 million construction program of Permian Basin Pipeline Company which was begun in June, 1952. Permian's pipeline system includes four compressor stations, two dehydration plants, one sulphur removal plant, gasoline plant, carbon dioxide removal plant and 234 miles of pipeline.

The new carbon dioxide removal facilities will permit processing 25 million cubic feet of natural gas daily during the first year of operations with provisions to expand capacity to 150,000,000 cubic feet daily. It is one of the largest plants of its kind in the country.

Construction of the plant was necessary because of the high content of carbon dioxide found in gas in the area. Removal of the carbon dioxide also aids in preventing pipeline corrosion.

Manufacturers announce new products, services and promotions

• **Gas volume meter,** a pocket-sized instrument which will accurately indicate the volume readership of any gas passed through it, works on a positive displacement principle. The instrument's accuracy is within five percent between the range of five to 65 liters flow rate per minute. Manufactured by J. J. Monaghan Co., Inc., Denver.

• **Conductivity flow cell** assembly can be used in conjunction with conductivity meter or recorder to determine the electrical conductivity of condensed steam and feedwater. Developed by Hall Laboratories, Inc., a subsidiary of Hagan Corp., Pittsburgh.

• **Safety step ladder** that will roll conveniently is being marketed by Precision Equipment Co., Chicago. The ladder may be rolled to the desired position, but as soon as the user steps on it, the casters disengage, making the ladder immovable. Casters automatically re-engage after user descends from ladder.

• **Inspection, repair and maintenance** for water-sealed gas holders are offered by The Flotation Co., Inc., Elizabeth, New Jersey. New service complements company's work in painting holders by flotation method.

• **Top burner timer,** a mechanical device which automatically times and shuts off the top burner is an exclusive feature this year of gas ranges made by Gaffers & Sattler, Los Angeles. The timer, coupled to the gas valve, closes the valve at the expiration of cooking time and the burner shuts off.

• **Porta-Brasive Blaster,** manufactured and sold by Pruden Tool Co., New York, is a small portable unit which can be attached to any air compressor to properly prepare pipe before bell joint clamps are installed on cast iron gas mains.

H. W. Nicholson, general superintendent of distribution, gas department, Public Service Electric and Gas Co., Newark, N. J., calls the blaster "a very valuable adjunct to our department. . . . The equipment is remarkably efficient in cleaning bells and spigots."

Mr. Nicholson remarks that the small blaster is taking the place of sand blasting equipment because it is so easy to move quickly to the right place at the right time. The material used in the portable blaster is flint shot grit which is comparatively dustless and can be reclaimed and reused.

Promotions

• During an intensive week-long drive to gain 200 new dealer accounts for Magic Chef incinerators, 300 St. Louis appliance dealers have been offered special floor plan financing on the product. The dealers will extend a 30-day free home trial to every prospective customer during retail campaign period, March 15-May 15. Advertising and promotion support will be supplied free of charge. Another Magic Chef idea is the unusual "talking oven"—a miniature record device that gives a one-minute sales pitch. The cigar box-sized unit plays a three-inch record which plays when the oven door is opened. A surface sticker tells the shopper to open the door and hear the "voice of Magic Chef".

• **Caloric Stove Corporation's** spring advertising will feature Dione Lucas, whose gas cooking show is now on television in more than 50 major markets. Campaign will kick off on April 5 with a two-page spread in *Life* Magazine.

• Outdoor poster advertising Norge gas range won first place in household appliances class at National Competition and Exhibit of Outdoor Advertising Art, Chicago. Another poster featuring Norge automatic washer won third place in same class. Company is a division of Borg-Warner Corp., Chicago.

IGT announces summer session

FOUR COLLEGE courses designed as refreshers for utility gas industry employees will be offered this summer at the Institute of Gas Technology, Chicago.

The four subjects are: Natural Gas (June 14-July 2); Transmission and Distribution (July 6-23); Peak and Base Load Natural Gas Substitutes (July 26-August 3), and Utilization of Gaseous Fuels (August 16-September 3).

E. S. Pettyjohn, director of the gas institute, explained that the courses are at college senior level and may be taken for academic credit by qualified undergraduates. Others will be awarded certificates upon successful completion.

The subjects will be taught at the Institute of Gas Technology on the Illinois Institute of Technology campus, and Illinois Tech housing will be available.

Please don't confuse

NO CONNECTION exists between D. W. Whitehead Manufacturing Corp., member of Gas Appliance Manufacturers Association and Trenton, N. J., gas water heater manufacturer, and the Jud Whitehead Heater Co., one of the defendants found guilty of illegal use of the A. G. A. Seal of Approval. The latter company was mentioned in an article titled "A. G. A. wins seal of approval suit" in the February, 1954, issue of A. G. A. MONTHLY.

SGA meets in Houston

SOUTHERN GAS Association's forty-sixth annual convention in Houston, to be held April 26 to 28 is drawing the largest advance registration in the organization's history—approximately two thousand delegates, visitors and ladies.

Headquarters will be the Shamrock and Rice Hotels. At the opening session on April 27, the association's president, H. K. Griffin and its managing director, R. R. Suttle, will deliver their reports.

E. H. Eacker, president of American Gas Association and president of The Boston Consolidated Gas Co., and Dr. Watrous H. Irons, president of the Federal Reserve Bank of Dallas, will be featured speakers at the other general sessions meeting.

Luncheon conferences, catering to interests of special groups, are being planned to cover the subjects of accounting, distribution, employee relations, sales, transmission and home service.

Staten Islanders move to new quarters

Gas appliances are viewed on the sales floor of The New York and Richmond Gas Company's new home at 15 Beach St., Stapleton, Staten Island. The company is occupying first, fourth and fifth floors of a fireproof building purchased last summer when old offices on Bay Street proved inadequate

Cascade Natural buys capital stock of Washington utility

CONSOLIDATED GAS Co., a gas utility company operating in the State of Washington, has announced a sale involving the entire outstanding capital stock to Cascade Natural Gas Corporation. Cascade Natural Gas Corp., with head offices in Seattle, is headed by Stewart Matthews, president.

The stock purchase, at an undisclosed amount, gives Cascade Natural Gas Corporation all the stock of Consolidated Gas Company which owned and operated gas utility plants in Toppenish, Zillah, Granger, Sunnyside, Grandview, Prosser, and Mabton, all in the lower Yakima Valley in central Washington.

Cascade Natural Gas Corporation owns and operates the gas utilities in the cities of Bremerton, Yakima, Walla Walla and Clarkston, Washington; Lewiston, Idaho and Pendleton, Eugene and Springfield, Oregon. In addition merger arrangements are nearing completion whereby Cascade Natural Gas Corporation will own and operate the gas utilities in Bellingham and Wenatchee, Washington.

Cascade will continue to operate in the above cities on a manufactured and liquid gas-air basis until the completion of the natural gas pipeline to the Pacific Northwest after which natural gas will be served to the cities mentioned on a greatly expanded basis.

New edition of "Gaseous Fuels" available

A COMPLETELY REVISED, corrected and enlarged edition of *Gaseous Fuels* combines the advantages of textbook explanation with tables, charts and graphs.

Four new chapters cover the use of liquefied petroleum gases; developments in catalytic reformed gases using natural gas or liquefied fuels; air-gas ratio in combustion; and odorization. Research developments and interchangeability of fuel gases are considered at length.

Typical problems are illustrated with simple solutions, and a handbook and reference guide is included.

The book, edited by Louis Schnidman, Rochester Gas & Electric Corp., is available from American Gas Association Headquarters, New York. Prices to members are: $5.00 each; $4.00 in lots of ten or more. To non-members: $6.00 each; $5.00 in lots of ten or more. To university students; $4.00 each.

Columbia system recruits young engineers on college campuses

NATURAL GAS, one of the fastest growing industries in the nation, is hard-pressed to fill its expanding quota of engineers. As part of its intensive college recruitment program, the Columbia Gas System, Inc. has released the 1954 edition of its college recruiting brochure. Copies have been sent to 90 colleges, 60 of which are in or near the company's seven-state, mid-Appalachian operating territory. They are being followed closely by eight recruiters who are rounding up a new crop of engineers to join the system's junior engineer training program after June graduations.

The recruiting brochures are the advertising aspect of the recruiting program. They serve as advance billing for Columbia's campus recruiters, and also bring in many written inquiries from other more distant campuses not visited by system representatives. (See "Columbia Solves Cadet Engineer Training Riddle" November 1953 A. G. A. MONTHLY.)

A.G.A. announces new publications during March

LISTED BELOW are publications released during March up to closing time of this issue of the MONTHLY. Information in parentheses indicates audiences for which each publication is aimed.

GENERAL MANAGEMENT

• **Report of the Personnel Committee** (for personnel executives and general management). Prepared by A. G. A. Personnel Committee, George W. Fewkes, chairman. Available from A. G. A. Headquarters, New York, 50 cents for members, $1.00 non-members.

SAFETY

• **How Injuries to Gas Men Might Be Avoided** (for safety men in the gas industry). Prepared by Howard Cook, Accident Prevention Committee. Available from A. G. A. Headquarters, New York, 10 cents each.

STATISTICS

• **Monthly Bulletin of Utility Gas Sales—January** (for gas companies and financial houses. Prepared by A. G. A. Bureau of Statistics, and available free.

• **Fourth Quarterly Report of Gas Sales** (for gas companies and financial houses). Available free from A. G. A. Bureau of Statistics.

Knowlton retires, Williams and Wade advance in Connecticut

ROBERT H. KNOWLTON has announced that he will retire as chairman of the board of The Connecticut Light & Power Company.

At a meeting recently, the board of directors elected Gilbert J. Williams executive vice-president and Alfred M. Wade vice-president in charge of sales. Mr. Wade succeeds Robert G. Ely, whose sudden death occurred in February.

Mr. Knowlton agreed to continue to serve as a director of the company and as a member of the board's executive committee. He is an engineering graduate of Cornell University, and has served the company since 1910. In 1926 he became assistant to the president and was elected vice-president in charge of sales and public relations in 1927. He was elected executive vice-president in 1939, president in 1948 and board chairman in 1952. Mr. Knowlton has been a member of the board of directors since 1935.

Mr. Knowlton is a member of American Gas Association, a former director of the Edison Electric Institute and a past-president of the New England Gas Association.

Mr. Williams, newly elected executive vice-president, joined the company in 1920. After varied experience as an engineer, he was made manager of the New Milford district in 1929. In 1937 he became division engineer for the company's eastern division and was appointed eastern division manager in 1946. Since 1952, Mr. Williams has served as central division manager and as western division manager.

Mr. Wade, the company's new sales vice-president, joined the advertising department in 1924. In 1928 he accepted a position with General Motors and in the next year was appointed assistant sales manager for the firm in India. In 1932 he rejoined CL&P's advertising department and in 1941 became manager of the Rockville district. Mr. Wade was appointed Greenwich district manager in 1944 and eastern division manager in 1952.

Personal and otherwise

Dahlstrom follows Agee as Public Service rate engineer

BERTIL P. DAHLSTROM has been named rate engineer of Public Service Electric & Gas Co., to succeed Howard H. Agee, who died last month. Edgar Harris has been appointed assistant to the rate engineer.

Mr. Dahlstrom started with Public Service as an industrial fuel cadet in 1924. In 1928, he was made assistant to the rate engineer and in 1947, was promoted to assistant rate engineer.

Mr. Dahlstrom, a Navy veteran of World War II, is a graduate of St. Lawrence University and Cooper Union. Active in American Gas Association, he was chairman of the Association's Rate Committee for two years during 1952 and 1953.

Mr. Harris was graduated from Stevens Institute of Technology and Fordham Law School. He started with Public Service in 1935, was made industrial fuel sales representative in 1936 and rate assistant in 1952. Mr. Harris is also a member of A. G. A.

O'Brien to edit Monthly as Cushman advances to PR post

JAC A. CUSHMAN, editor of the American Gas Association MONTHLY, advanced on April 1 to the A. G. A. Public Information Bureau to help organize a public relations program for the gas industry. He is succeeded as editor of the MONTHLY by Vaughan O'Brien, editor of *Gas Appliance Merchandising* and managing editor of *Gas Age* magazine.

Mr. Cushman will assist James M. Beall, A. G. A. director of public information, in expanding and coordinating the Association's public relations activities. Immediate objective of the new program will be to stimulate more effective use of public relations tools and techniques at the local company level.

Prior to his new assignment, Mr. Cushman edited the MONTHLY from early 1947 until July 1951, when he was recalled for active duty in the Air Force. He returned to the position of editor last summer. Before joining A. G. A., he was assistant financial editor of *The Hartford Courant*, morning newspaper, and gained public relations experience with an agency in Connecticut.

Mr. O'Brien was first associated with Moore Publishing Company in January 1948. Later, he became editor of *Gas Appliance Merchandising*. Recently, he added the title of managing editor of *Gas Age* Magazine. Mr. O'Brien has served as night editor for *Motion Picture Daily* and has held various editorial positions with Columbia Pictures and several western newspapers.

Camp succeeds Hirschfield as Oklahoma utilities corporation head

CONSOLIDATED GAS Utilities Corp., Oklahoma City, has announced that Norman Hirschfield has resigned as president of the company. Mr. Hirschfield will be succeeded by Richard W. Camp, vice-president of Consolidated Gas since 1946. Curtis B. Day, who has served as general manager in charge of operations, has been elevated to vice-president.

Prior to his joining Consolidated Gas Utilities, Mr. Hirschfield served as vice-president of A. M. Lamport and Co., New York investment banking firm. He is a director of the Arkansas Western Gas Co., Fayetteville, Arkansas.

Mr. Camp is a graduate of the University of Oklahoma where he majored in geological engineering. Prior to his affiliation with Consolidated Gas in 1928, Mr. Camp was employed as an engineer by Oklahoma Gas & Electric Company.

Mr. Camp is a member of American Gas Association; American Institute of Mining and Metallurgical Engineers; American Association of Petroleum Geologists; American Petroleum Institute and National Society of Professional Engineers. In 1952, he served as president of the Oklahoma Utilities Association.

Before joining Consolidated Gas in 1928, Mr. Day, the new vice-president, was associated with both Oklahoma Gas & Electric Company and Oklahoma Natural Gas Company. Since 1948, he has served as general manager in charge of operations for Consolidated. He, too, is a member of American Gas Association.

Executives promoted by Lowell Gas Company

THE LOWELL GAS Company in Massachusetts has announced several important executive personnel changes. D. H. Levan, president since 1935, has retired and will now serve as a director. As president, he has been succeeded by Harry J. Patterson, who is also a director. F. L. Putnam, president of F. L. Putnam & Co., Inc., Boston investment bankers, has been elected chairman of the board.

The new president has been associated with the company since 1925, serving as plant, distribution and general superintendent, and vice-president. He is a director of New England Gas Association and a member of the Guild of Gas Managers.

Mr. Putnam is chairman of the Executive Committees of New Industrial Plants of Lowell, Inc., and is an officer and director of Buzzards Bay (Mass.) Gas Company and The Greenwich (Conn.) Gas Company.

Jersey company elects McDonald and Luce to top posts

PUBLIC Service Electric and Gas Co., Newark, N. J., has announced the election of Lyle McDonald as chairman of the board and Donald C. Luce as president. George H. Blake, who has been president since 1945, has reached the retirement age of 70, and will continue as a director.

Mr. McDonald, the new chairman, has been a vice-president since 1944 and a director and member of the executive committee of the board of directors since 1945. He started with Public Service in 1916 as an accountant, was promoted comptroller in 1937, vice-president and comptroller in 1944 and vice-president in charge of finance in 1948. He is a graduate of New York University.

Mr. Luce has been vice-president in charge of combined operations, a director and member of the executive committee of the board of directors since 1950. Previously he had been vice-president in charge of electric operation and prior to that, for six years, general manager of the electric department. He started with Public Service in 1924 as a cadet engineer. Mr. Luce is a graduate of Lehigh University.

George H. Blake, who will retire as president, has been with Public Service since 1910, having started as a trial attorney. He was made general solicitor of the company in 1923, a vice-president in 1937, executive vice-president in 1943 and president two years later. Mr. Blake was made a director in 1934 and has been a member of the executive committee of the board of directors since 1935.

Donald C. Luce

Lyle McDonald

All three men are members of American Gas Association.

Engineer joins A. G. A. as General Management secretary

HARRINGTON A. Rose, gas engineer for Stone & Webster Service Corp., has been named secretary of the General Management Section of American Gas Association, effective April 1. Bruce A. McCandless has relinquished the post of acting secretary of the General Management Section in order to devote full time to his administrative duties as assistant to the managing director.

General Management, newest Section in A. G. A., was formed early last year. It includes committees on accident prevention, insurance, public information, and other subjects of direct interest to top management.

Mr. Rose studied engineering at Syracuse University. He started in the gas business in 1947 working for Conversions and Surveys, Inc. as a field adjuster and later advanced to job superintendent and coordinator. He also worked on conversion programs for Consolidated Gas Electric Light and Power Company of Baltimore, The Brooklyn Union Gas Co., Kings County Lighting Co., and South Jersey Gas Company.

In August 1951, he organized and directed a changeover program for Piedmont Natural Gas Co., Charlotte, N. C., involving direct contact with 40,000 customers in 11 cities. He has served as gas engineer with Stone and Webster Service Corporation from December 1952 to the present time.

Goffe promoted

W. F. GOFFE, JR., has been appointed system engineer of Equitable Gas Co., Pittsburgh. Mr. Goffe heads a new division, a newly created unit resulting from a reorganization of the transmission engineering and distribution engineering divisions.

Mr. Goffe began employment with Equitable in 1937, and has since served in several supervisory capacities. He is a graduate of the University of Pittsburgh School of Mines, where he received his B.S. in petroleum engineering.

He is a member of the American Gas Association, Engineer's Society of Western Pennsylvania, Pennsylvania Natural Gas Men's Association, Pennsylvania Society of Professional Engineers. He is now serving as a member of the Operating Section's Distribution Committee and the Subcommittee on Distribution Design & Development.

Hoots named A. G. A. Rate Committee vice-chairman

PAUL F. HOOTS, assistant to the president, New Orleans Public Service, Inc., has been appointed vice-chairman of the American Gas Association Rate Committee. The appointment was made by Howard F. Noyes, senior vice-president, Washington Gas Light Co., chairman of the A. G. A. General Management Section which includes the Rate Committee.

Mr. Hoots will aid George A. Morgan, The Peoples Gas Light and Coke Co., Chicago, chairman of the A. G. A. Rate Committee, in conducting the operation of the committee. The principal responsibility of the Rate Committee is to make studies of various costs involved in supplying gas to different classes of customers and to recommend forms of rates designed to meet most equitable distribution of such costs and at the same time to secure adequate and just revenue.

In 1919, Mr. Hoots joined the New Orleans Railway and Light Company, predecessor of New Orleans Public Service, Inc., as a chemist. Subsequently he served as chemist and test engineer, assistant chief engineer, research engineer and chief engineer of the company's engineering department. In 1939 he was appointed assistant to president, the position he now holds.

Mr. Hoots was educated at the University of Illinois. He has been active for many years in A. G. A. affairs and he has served on the A. G. A. Industrial Research Committee and as a member of the Rate Committee.

Paul F. Hoots

OBITUARY

Robert G. Ely

sales vice-president of The Connecticut Light and Power Co., died suddenly at his home on February 20 of a heart attack. Mr. Ely was appointed the company's director of sales in 1951 and was elected vice-president in charge of sales a year later. Before joining the Connecticut utility three years ago, he had been assistant manager of industrial power sales for the Public Service Electric and Gas Company of New Jersey.

Mr. Ely was a member of American Gas Association and Edison Electric Institute. He is survived by his wife, two children, one grandchild, his mother and two brothers.

Jacob B. Jones

retired New Jersey utilities executive, died on February 6 at the age of 72. Prior to his retirement in 1951, he had been superintendent and treasurer of Bridgeton Gas Light Company.

Mr. Jones was a former president of New Jersey Gas Association, and in years past was active in the affairs of American Gas Association.

Lake Shore

(Continued from page 10)

to build our local advertising effort. People throughout our area are becoming more gas-conscious as a result of the national advertising supplemented by our own local promotion.

The research program, small as it may be, is ready for the first step to provide up-graded appliances that are more competitive and will build more sales.

Question—What specific A. G. A. activities have you found most helpful to the small gas company?

Mr. Willis—The advertising help is of tremendous value to us. We get more advertising benefit from dollars spent when we can avoid the expensive preparation of advertising layouts. Incidentally, we have been helped considerably in this matter by the advice and counsel of The East Ohio Gas Co., our nearest large neighbor in the industry.

The second important A. G. A. activity helpful to us is the frequency of visits by the Association representative, Mr. Hoyle, who is able to pass on to us ideas he has picked up in similar visits with other companies in this area and who is able to keep us in close touch with general industry progress.

Sales concentration

Question—On what gas appliances are you concentrating your major sales emphasis?

Mr. Willis—Our electric friends have made their greatest inroads in the fields of cooking and water heating. We have concluded that the future of our company depends primarily upon reselling the housewife in pride of ownership of a modern up-to-date gas range in her kitchen. Therefore, we are emphasizing the sale of matchless gas ranges as the key to our entire future. At the same time, we are trying to recoup our position in the water heating field by the institution of a water heater rental program. We are paying dealer salesmen gas load bonuses of $10 for every second grade gas range sold and $20 for every matchless range placed in service. We are paying dealer salesmen gas load bonuses of $7.50 for every 30-gallon automatic water heater sold and $10 for every 40-gallon water heater placed in service.

Question—What specific results has your water heater rental program achieved so far?

Mr. Willis—During the first two weeks of the rental program we installed about 200 gas water heaters. Approximately 40 percent of these were rented through dealers. We found the speed of our initial program limited only by the availability of water heaters from the manufacturer and the ability of installation crews to place heaters in customers' homes. Rental agreements during the first two weeks outran our ability to obtain and install water heaters.

Question—We understand that Lake Shore actively merchandises gas appliances. What dealer program has been developed?

Mr. Willis—We are doing everything possible to help the dealers and build their cooperation. Last year we employed a dealer relations representative in our sales department. We have started a dealer cooperative advertising program whereby we contribute 40 percent to all dealer gas advertising. We are paying dealer salesmen the gas load bonuses I have mentioned. We are conducting training schools for dealers and their salesmen. We are providing free display material, installing necessary facilities to provide each dealer with operating gas demonstration models on his floor, and are installing free of charge in dealers' and dealer salesmen's homes gas appliances supplied by the dealer.

Question—Do you encourage non-sales employees in your company to turn in the names of sales prospects?

Mr. Willis—For some years past we have encouraged all employees of the company to turn in sales tips. However, starting this year we have a tip bonus system which applies not only to employees but also to the members of their families. For tips resulting in a sale, we pay the following during special campaigns: ranges, $4.00; Servel refrigerator, $10.00; Servel Ice-Maker refrigerator, $15.00; water heater, $5.00; incinerator, $5.00; clothes dryer, $5.00; water heater rental, $2.00.

Service policy

Question—Do you have a specific appliance servicing policy? If so, have you acquainted your customers with this policy as suggested under the Gas Industry Development Program?

Mr. Willis—Yes, and our policy has been revised this year to provide more free service than in the past. We have specifically outlined the limits of the policy and have advised our customers both by direct mail and by newspaper advertising of the exact things which customers can expect free of charge from our service department.

Question—Are you planning to upgrade gas appliance sales in any particular respects?

Mr. Willis—Emphatically yes! We are pushing matchless gas ranges very strongly in our own sales organization, and from the load bonuses to dealer salesmen it is quite apparent that these are designed for up-grading. In addition we have selected for the water heater rental program one of the highest quality water heaters in use in our area. In order to acquaint the new class of customers who will be reached through the rental program with the service which can be expected from high quality appliances, we are also placing emphasis upon 40-gallon water heaters rather than smaller sizes.

Question—What is Lake Shore's policy on installation of gas appliances?

Mr. Willis—Our own service crews install any appliances with the exception of central domestic heating systems and certain categories of industrial equipment. We offer our services to any gas dealer who does not have an installation department. When dealer installations are made, we bill the dealer, and the dealer is able to sell the equipment at an installed price to his customers.

Question—Are you taking any action to cement better community relations?

Mr. Willis—We have started a series of reports explaining our situation and hopes and aspirations for the future. These reports are mailed to all of the influential citizens in our service area. The company has participated actively in many of the civic activities which tend to aid our community relations. We are also holding frequent meetings with public officials throughout the area and are working closely with all of the newspapers in our area to

seek complete reporting of our activities.

Question—In your opinion, what steps should small gas companies take to help strengthen the future of the gas industry?

Mr. Willis—Small gas companies can be a testing ground for new aggressive policies which will benefit the industry. The reaction of consumers and the local feel of public relations are more easily determined by a small company than a large company serving a metropolitan area. Therefore, some sort of market research by small companies is important to evaluate trends and results which may be established by new programs. However, the new programs are essential before there is anything to survey.

We believe that it would be of help to the entire industry if every small company could take stock of its own situation and devise the experimental programs required to meet the deficiencies that are found. Once these programs are tested in action and measured by market research, they may well set a pattern that can be used on a more extensive scale by larger utilities. I believe one of the fundamentals of this entire approach is for small utilities to meet electric competition by establishing adequate promotion budgets on the principle that increased sales in the long run offer the only way to provide the public with good service at reasonable rates.

Gas supply men

(Continued from page 37)

mon carrier frequencies, where service provided would be on channels less congested than those presently activated.

It was suggested that time at next year's conference be devoted to VHF usage by distribution companies, telemetering for measuring and billing purposes as well as for control functions, and cost of operating VHF and microwave systems.

Compressor stations

Two luncheon conferences were held on this subject. Rex. V. Campbell, chairman, Compressor Stations Subcommittee, presided at the first meeting and N. C. Comfort, vice-chairman, at the second.

A discussion on *pulsation* in compressor stations solicited statements and questions from 30 or 40 participants. The pulsation discussed had to do with piping in compressor stations, what causes vibrations and pulsations, the reason that certain methods are used to dissipate pulses, and the sizing of headers and piping. Hold down straps were discussed at length.

One manufacturer mentioned how thorough studies were made to cut down the pulsation in piping. Other people made statements that by the use of hold down straps with rubber belting under them they cut down pulsation in their piping. Others stated it is necessary to weight the piping with large concrete blocks to cut down pulsations. Also discussed was the matter of changing locations of gas entering the headers.

The second part of the conference consisted of *water disposal* and treatment. Considerable discussion followed on the treatment of cooling water—concerning how chromates, glucosates, chlorine, blue vitriol and other products affect water. The disposal of water was also discussed. Some people drill wells after procuring the approval of the state to dispose of the water in certain areas. Others mentioned how disposal ponds were built and some said they used creeks and rivers. It was a foregone conclusion that it is necessary to remove under state supervision any treatment or parts that might affect life before it was disposed of in the streams adjacent to the plant sites.

The third part of this conference concerned *gas turbines*. Several pictures were shown and a discussion followed concerning this turbine and the time taken to remove combustion chambers from the turbines. Lengthy discussions were experienced on man power needed, the surges in piping where gas turbines are used.

The second day of the conference was devoted to *preventative maintenance of gas systems*. Three people stated how preventive maintenance is carried on in their systems and people were asked from the floor to discuss whether sufficient tools, manpower and what time was spent principally on gas engines.

Discussion covered the overhaul of main and auxiliary units—on the painting of piping and other parts principally concerned with compressor stations.

The second part of this session concerned *gas cleaners*. There is divided opinion as to the effectiveness of gas cleaners. However, there are many variables in gas cleaning. About ten people took part in this discussion telling what they had found in their pipeline and what the scrubbers and cleaners had actually removed.

It was generally conceded that full opening valves, pig traps and gas cleaners are a necessary part of new long lines. In other words, these are improvements which have come through experience. The second conclusion drawn was that most reputable gas cleaner manufacturers today furnish cleaners which will do the job if they are not overloaded.

Pipeline conference

Approximately 100 persons attended this luncheon conference. W. B. Haas, Northern Natural Gas Co., Omaha, Neb., presided.

Lowell Elder's paper "Personnel and Equipment Requirements for Pipeline Operation and Maintenance" was a very comprehensive report relating to the Columbia Gas System.

Aubry L. Roberts, Texas Gas Transmission Corp., presented J. W. Polkinghorn's paper on "Maintenance of Pipeline Right-of-Way". A few of the pertinent points covered were: a thorough understanding of farmers' problems; good public relations with farmers; minimum damages by contractor, and soil erosion control.

Clint McClure's paper, "Internal Cleaning and Testing of Gas Transmission Lines" had many controversial aspects. However, El Paso's experience would justify their practice and procedure and should prove helpful to anyone confronted with line cleaning problems.

Harvey Proctor's discussion of "Welding Practices on Operative High Pressure Transmission Lines" was most provocative. In fact, Southern California Gas Company has a number of practices that are unique in the industry and from their experiences, one can assume that they are justified in following their present practices.

It was suggested that some practice or policy should be sponsored by A. G. A. covering recommended procedures and practices for welding on pipelines while in service.

Gas measurement

This luncheon conference reviewed the establishment and assignments of the Gas Measurement Committee, the task committees, and their integration with the research committees, and so on.

Principal topic of discussion was the expansion of Gas Measurement Committee Report #2, widening its scope and including additional information now separately obtained.

The revision of the Gas Measurement Committee Report #2 includes:

(1) Expansion of the basic orifice factors to include up to 30" meter tubes.

(2) Basic orifice factors for various pipe wall thickness due to requirement for measuring gas at higher pressures.

(3) Recognition of orifice fittings.

(4) Use of plug valves.

(5) Recognition of bored meter tubes.

(6) Recognition of the method for determining whether pulsation is within allowable limits.

(7) Plans for computing supercompressibility factors.

(8) Tolerances for orifice diameter, plate thickness and smoothness, location of pressure tap holes, pipe roughness, etc.

(9) Replacement of pipe tolerance table with graph to permit interpretation of intermediate Bata ratios.

(10) Clarification of design and location of straightening vanes.

(11) Condensed method of finding Reynolds number factor F_r to reduce the number of tables required to cover the range of conditions.

The meeting was very well attended with 39 gas measurement engineers and

interested people present. A lively discussion was the order of the day.

Underground storage

John V. Goodman, chairman, Committee on Underground Storage, presided at this luncheon conference.

Four important reports by subcommittee chairmen were featured at this meeting. C. C. Ingram reported on deliverability problems; C. W. Studt covered storage lease forms, and L. R. Kirk, verifying storage inventory.

A fourth report of the Statistics Subcommittee by J. B. Corrin, Jr. is covered in detail in a special article in the front of this issue of the MONTHLY.

Natural gas production

T. W. Johnson, chairman, Natural Gas Production Committee, presided at this informative session.

The meeting was devoted to further discussion of two papers presented at the general sessions.

W. T. Hollis, El Paso Natural Gas Co., discussed "Drilling Wells with Gas or Air as a Circulating Medium".

G. C. Howard, Stanolind Oil and Gas Co., covered "A Review of Hydraulic Fracturing in the Petroleum Industry".

Pipeline construction

A. J. Shoup, vice-chairman, Pipeline Subcommittee, presided at this meeting, which featured four important subjects.

Dan Williamson, Transcontinental Gas Pipe Line Corp., discussed right-of-way and damages as related to pipeline construction. He paid particular attention to the need for maintaining good public relations.

F. A. Hough, Southern Counties Gas Co., presented a lucid talk on proof testing of pipelines after installation. Construction equipment limitations were covered by G. Austin Manuel, Williams-Austin Company. Norman F. Blundell, Gulf Interstate Gas Co., briefed the group on inspection during construction.

Dehydration panel

This luncheon conference dehydration panel included J. H. Echterhoff, United Gas Pipe Line Co., Shreveport, La.; E. A. Koenig, Wilcox Trend Gathering System, Inc., Dallas, Texas; Laurance S. Reid, University of Oklahoma, Norman, Okla.; Fred Zapffe, Lone Star Gas Co., Dallas, Texas, and Ovid Baker, moderator, Magnolia Petroleum Co., Dallas, Texas. Some of the highlights are:

The gas transmission company becomes concerned when water contents in their pipelines start to rise above 3 lb/MMcf. Although contracts ordinarily are written for 7 lb/MMcf the rise in water content is indicative of future trouble and its source should be located and corrected at once. It is sometimes possible to economically operate gathering systems several hundred miles in length by alcohol injections instead of dehydration. In some cases alcohol injection rates of 0.3 to 0.5 gal/MMcf are sufficient and dependable deliveries can be made during severe winter weather.

Crude oil in the gas line will also act as an antifreeze to prevent hydrate formation. At 1000 psia and 8000 cu ft/bbl ratio, the hydrate formation temperature is depressed about 2 F. At 2,000 cu ft/bbl at 10 F depression is reported. The cost of dehydration seldom exceeds 1/4¢/Mcf for either glycol or solid desiccant plants.

Recommended design bases were given for both glycol and solid desiccant dehydrators.

The number of regenerations and amount of heavy oil entering with the gas are the main factors shortening solid desiccant life. Partial removal of the entrained oil may be effected by scrubbers packed with clay saddles or three inches of wool felt on top of the desiccant.

Solid desiccants are better than glycol for dehydrating high temperature gas and 115 F inlet gas into a solid dehydrator gave many operating difficulties and shortened desiccant life. The most economic method of dehydrating high temperature gas is to install a cooler ahead of the dehydrator and cool the gas to

(Continued on next page)

Natural gas reserves *(Continued from page 6)*

TABLE 3 SUMMARY OF ANNUAL ESTIMATES OF NATURAL GAS RESERVES FOR PERIOD DECEMBER 31, 1945 TO DECEMBER 31, 1953

(Millions of Cubic Feet—14.65 psia, at 60 deg. F)

	Natural Gas Added During Year						
Year	Extensions and Revisions	Discoveries of New Fields and New Pools in Old Fields	Total of Discoveries, Revisions and Extensions	Net Change in Storage	Net Production During Year	Estimated Proved Reserves as of End of Year	Increase over Previous Year
1945	—	—	—	—	—	147,789,366	—
1946	a	a	17,729,152	a	4,942,617	160,575,901	12,786,535
1947	7,570,654	3,410,170	10,980,824	a	5,629,811	165,926,914	5,351,013
1948	9,769,483	4,129,089	13,898,572	51,482	6,007,628	173,869,340	7,942,426
1949	8,061,429	4,612,870	12,674,299	82,746	6,245,041	180,381,344	6,512,004
1950	9,172,381	2,877,351	12,049,732	54,301	6,892,678	185,592,699	5,211,355
1951	13,013,606	3,039,385	16,052,991	132,751	7,966,941	193,811,500	8,218,801
1952	8,934,470	5,411,043	14,345,513	198,850	8,639,638	199,716,225	5,904,725
1953	13,371,355	7,081,661	20,453,016	516,431b	9,238,540	211,447,132	11,730,907

a Not estimated.
b All native gas in storage reservoirs formerly classified as a natural gas reserve is included in this figure.

TABLE 4 SUMMARY OF ANNUAL ESTIMATES OF NATURAL GAS LIQUIDS RESERVES FOR PERIOD DECEMBER 31, 1946 TO DECEMBER 31, 1953

(Thousands of Barrels of 42 U. S. Gallons)

	Natural Gas Liquids Added During Year					
Year	Extensions and Revisions	Discoveries of New Fields and New Pools in Old Fields	Total of Discoveries, Revisions and Extensions	Net Production During Year	Estimated Proved Reserves as of End of Year	Increase Over Previous Year
1946	—	—	—	129,262	3,163,219	—
1947	192,237	59,301	251,538	160,782	3,253,975	90,756
1948	405,874	64,683	470,557	183,749	3,540,783	286,808
1949	294,211	92,565	386,776	198,547	3,729,012	188,229
1950	707,879	58,183	766,062	227,411	4,267,663	538,651
1951	648,497	75,494	723,991	267,052	4,724,602	456,939
1952	475,170	81,668	556,838	284,789	4,996,651	272,049
1953	648,047	95,922	743,969	302,698	5,437,922	441,271

(a) CRUDE OIL - AMERICAN PETROLEUM INSTITUTE

	(Barrels of 42 U. S. Gallons)	
Total proved reserves of crude oil as of December 31, 1952		27,960,554,000
Revisions of previous estimates	+1,264,832,000	
Extensions of old pools	1,439,618,000	
New reserves discovered in 1953 in new fields and in new pools in old fields	591,680,000	
Proved reserves added in 1953		3,296,130,000
Total proved reserves as of December 31, 1952 plus new proved reserves added in 1953		31,256,684,000
Less production during 1953*		2,311,856,000
Total proved reserves of crude oil as of December 31, 1953		28,944,828,000
Increase in crude oil reserves during 1953		984,274,000

(b) NATURAL GAS LIQUIDS - AMERICAN GAS ASSOCIATION AND AMERICAN PETROLEUM INSTITUTE

	(Barrels of 42 U. S. Gallons)	
Total proved reserves of natural gas liquids as of December 31, 1952		4,996,651,000
Revisions of previous estimates and extensions of old pools	+ 648,047,000	
New reserves discovered in 1953 in new fields and in new pools in old fields	95,922,000	
Proved reserves added in 1953		743,696,000
Total proved reserves as of December 31, 1952 plus new proved reserves added in 1953		5,740,620,000
Less production during 1953*		302,698,000
Total proved reserves of natural gas liquids as of December 31, 1953		5,437,922,000
Increase in Natural Gas Liquids reserves during 1953		441,271,000

(c) TOTAL LIQUID HYDROCARBONS - A. P. I. & A. G. A.

	(Barrels of 42 U. S. Gallons)	
(Tables 1a and 1b combined)		
Total proved reserves as of December 31, 1952		32,957,205,000
Revisions of previous estimates and extensions of old pools	+3,352,497,000	
New reserves discovered in 1953 in new fields and in new pools in old fields	687,602,000	
Proved reserves added in 1953		4,040,099,000
Total proved reserves as of December 31, 1952 plus new proved reserves added in 1953		36,997,304,000
Less production during 1953*		2,614,554,000
Total proved reserves of liquid hydrocarbons as of December 31, 1953		34,382,750,000
Increase in Total Liquid Hydrocarbon reserves during 1953		1,425,545,000

* The 1953 production figures were compiled by the committee and where necessary are based on eleven months actual production with an estimate for December. Any variance between the actual production, as later reported, and the figures used herein will be compensated for through revision when the following year's reserve report is compiled. These revisions have in the past been very small.

(Continued from preceding page)

around 90 F.

Glycol dehydrators in Canada operating at contactor temperatures of 35 F have given decreased dew point depressions due to poor gas-liquid contact at the higher solution viscosities. Heating the circulating solution to 50 F has restored dew point depression to normal values of 65 F.

Dispatching luncheon

T. B. Kelley, chairman, Load Dispatching Committee, presided. There was a request from the floor for information regarding dispatching problems in the operation of centrifugal compressors and also gas turbines. So much interest was shown in these subjects that the group unanimously agreed that a paper should be prepared for the next load dispatching luncheon conference in connection with the Gas Supply, Transmission and Storage Conference in Pittsburgh, March 24 and 25, 1955.

Chairman Kelley announced that the Communications Committee is planning to discuss operation of telemetering and remote control equipment at the luncheon conference in Pittsburgh.

Weather forecasts were also discussed. It was generally agreed that forecasts issued by the weather bureau are too general in scope and do not pinpoint temperatures closely enough for the needs of many gas companies. Many of the persons present reported that they depend primarily on reports supplied by commercial forecasters and in some cases by their own meteorologists.

Mr. Kelley gave a progress report on work on preparing a dispatching manual or guide. He noted that more specific data are needed on the three general types of dispatching—long lines, network and distribution. The following subcommittees were appointed to investigate requirements and methods in these fields: long lines—A. L. Bristow, H. B. Lafferty; network—S. A. Chadwell, H. L. King; distribution—Ray L. Zeliff, Jr., and A. L. Wallace.

A meeting will be called this fall to study the assembled data and commence work on the dispatching guide.

Accounting

(Continued from page 30)

makes them more eager to win public acceptance for their company.

After a decision has been made on the type of survey to be conducted, who is to be responsible for it, and where the manpower is to be obtained, then the sample has to be selected. In order to determine the cross section to be interviewed, most companies use proved sampling techniques to assure an accurate representative sample of the total population with consideration for geographical location, area saturation, economic levels, and racial groups.

The most common and practical tool available is the census tract which is occasionally augmented by information from the company's own records. Special emphasis is placed on proper stratification of respondents; otherwise the sample will be non-representative and the results invalid insofar as the total population is concerned. Surveys are generally restricted to residential consumers because in most utilities the commercial and industrial customers' accounts are followed closely by special representatives of the company. These customers would probably take action anyhow if any situation developed with which they did not agree.

The size of the sample varies considerably; one company reports a one percent sample, another ten percent and so on up to 15 percent. It should be remembered that proved sampling technique shows that a small sample when properly selected is just as effective as a large one. It is possible to obtain as accurate a picture with 1000 interviews as with 100,000.

Those who became sampling skeptics after the failure of the 1948 election polls, may not consider that that incorrect forecast was partly attributable to the fact that it was based on an action the respondents said they were going to take in the future. Customer opinion surveys are based on what a person thinks and feels at the *present time*. An election poll on two almost equally popular candidates may err by

(Continued on next page)

New A.G.A. members

Individual Members

Emanuel Toder, Consolidated Edison Co. of New York, Inc., New York, N. Y.
Samuel J. Topping, Lynn Gas & Electric Co., Lynn, Mass.
C. E. Trimmer, Southern California Gas Co., Long Beach, Calif.
J. Milton Trompen, Consolidated Edison Co. of New York, Inc., New York, N. Y.
Walter Ullrich, Brooklyn Borough Gas Co., Brooklyn, N. Y.
Andrew J. Van Hoef, Michigan Consolidated Gas Co., Detroit, Mich.
Franklin E. Vilas, Consolidated Edison Co. of New York, Inc., New York, N. Y.
Harold E. Wade, Peoples Gas Light & Coke Co., Chicago, Ill.
Verbon E. Waggoner, Citizens Utilities Co., La Junta, Colo.
L. J. Wagner, Consolidated Edison Co. of New York, Inc., New York, N. Y.
Lloyd P. Walker, Consolidated Edison Co. of New York, Inc., New York, N. Y.
Paul K. Wallace, Oklahoma Natural Gas Co., Tulsa, Okla.
Francis X. Wardman, Brooklyn Borough Gas Co., Brooklyn, N. Y.
Mowton L. Waring, Consolidated Edison Co. of New York, Inc., New York, N. Y.
Morgan Washburn, Morgan Washburn Co., Los Angeles, Calif.
H. H. Wenk, Plastic Process Co., Inc., Los Angeles, Calif.
Charles R. Williams, Pacific Northwest Pipeline Corp., Houston, Texas
Frederick C. Williams, Consolidated Gas Electric Light & Power Co., Baltimore, Md.
Robert D. Williams, Western Kentucky Gas Co., Owensboro, Ky.
Harold J. Withrow, Michigan Consolidated Gas Co., Grand Rapids, Mich.
Gerald C. Wolcott, Southern California Gas Co., Northridge, Calif.
Richard A. Wolverton, Pacific Gas & Electric Co., Oakland, Calif.
Charles T. Woodroof, American Radiator & Standard Sanitary Corp., Pittsburgh, Pa.
Clark M. Wright, General Electric Co., Schenectady, N. Y.
Norman R. Wyckoff, Southern Counties Gas Co., La Habra, Calif.
Don C. Zinter, The Adams Manufacturing Co., Cleveland, Ohio

(Continued from previous page)

a very small percentage and result in a completely wrong prediction. If the principal objective of a survey is to determine general trends or feelings, then even though an error of five or ten percent occurs, the trends and customer attitudes may still be shown accurately enough.

Customers who make up the "sample" may be contacted personally, or by telephone or mail. Mail contact, as has been pointed out, is useful in determining customer feeling after a service call or his reaction to some other company contact or in procuring information relative to specific items. It is less satisfactory for samples of general opinion. Few people take the time or trouble, small as it may be, to answer mailed questionnaires. Response varies anywhere from 15 percent to 45 percent of the already small sample. Such returns can not accurately represent the entire population.

Although productive for limited purposes, telephone surveys are also not completely satisfactory because coverage will vary with the telephone saturation in the area sampled. Furthermore, there seems to be a general indisposition on the part of the public to talk to some one they do not know and can not see. They give cautious answers in a reluctant manner. Personal contacts are more productive and accurate, whether used in "spot" or "continuous" surveys. Persons interviewed, if properly approached, will take time to answer questions and when convinced of the interviewer's sincerity, will rarely hesitate to speak their minds. Personal contacts are the only kind used for a "continuous survey" in depth.

For surveys in depth, experienced company interviewers try to steer the conversation through the technique of "leading" questions which tend to draw from the customer his opinions on specific issues. In this way, persons are, almost unwittingly, persuaded to talk freely and in so doing often indicate important sources of irritation that they would not normally and voluntarily report. An example of a typical statement is: "I am with the Gas (or Electric) Company, and I would like to talk to you a little about your service."

The introduction does not imply an invitation for complaints but rather conveys the thought that the area for discussion is broad. After the introduction, the interviewer may lead the conversation by showing the customer the way his or her name is printed on the bill and ask if it is correctly spelled.

Once the opening is established, the interviewer gradually guides his questioning toward the facts he is seeking first by simple questions as: "Do you have a television set?" Then: "Do you remember seeing or hearing any of the company's spot announcements?" By this time the customer will be at ease. He or she can now be led into an informal chat which might continue with such a question as: "How have your gas or electric bills been?" Then, through similar leading questions, the representative tries to get a true and voluntary expression of the customer's exact opinion of and feeling toward the company in general.

Regardless of the type of survey or method of approach, the validity of results is dependent upon the questions asked, how they are phrased, and the sequence in which they are presented. Before preparing a questionnaire, it may be necessary to consult an outside research organization or to ask the advice of other utility companies that have had experience in carrying on a survey of the type proposed.

The kind of survey conducted, how personnel is recruited, and the method of contact determine the cost of the survey. Or, stated another way, the amount of money appropriated controls how much and what kind of survey activity can be undertaken. A direct answer, therefore, to the question "What does it cost?" is difficult to give because of the many variables involved.

The major factor is the type of survey but other variables are such things as differentials in wage rates between localities, type of personnel used, percentage of returns and the extent of outside research help employed. In reviewing reports from representative companies, it was found that the cost runs anywhere from ten cents to $7.00 per completed interview. When the cost is low, say a dollar or less, the survey is conducted on a limited scale by mail or telephone sampling. For instance, a company which reports an approximate cost of ten cents per contact, uses a two-way postal card to obtain a small daily sample of customers' satisfaction with a recent service call or other specific company contact.

Another company which reports a cost of 27 cents per contact, exclusive

of printing and stationery, conducts a trend survey each year under the direction of one person. The questionnaire is delivered and picked up by company personnel when in the neighborhood and results are compiled by machine tabulation during regular working hours. Still another company which uses mail surveys, reports a cost of 60 cents per return exclusive of analysis and report expense, and conducts its survey twice a year using a one percent sample of residential customers. The survey is directed by the sales department, apparently as an extracurricular assignment.

When the cost per contact is above $1.00 the project is of a permanent nature, has assigned supervision and personnel, and conducts "spot" surveys, as well as surveys in depth. One company in this group reports a total cost of $1.15 per interview for 1952. Another company reports an expense of $1.50 per interview, and still another $2.50. The average ranges from $2.00 to $4.00.

All companies report that surveys conducted by outside concerns, whether "continuous" or "spot", are at a minimum, double the cost of company-conducted programs. They urge, however, that this fact should not be construed to mean that such organizations may not have a needed role. For example, a company which conducts its own survey program may find some advantage in having an outside concern conduct an occasional "spot" check survey on the company's own activity, or obtain answers to questions of a type which respondents might not answer impartially to a company representative.

Such a question might be "Which utility do you think gives you the best service for the money you pay—the electric company, the gas company, the water company, or the telephone company"; or, "Which one do you like best to deal with?"

The answers checked off to such a series of questions would lead the agency interviewer into some "Why" questions which could be steered toward the particular utility which he is representing.

No matter how expensive or inexpensive the survey may be, the time and money spent in planning, interviewing and analyzing must be productive enough to pay its way. The answers to the question "What is learned and how is it used" hold the key to the "do or not to do" decision which a company contemplating survey work, must make.

Companies which have carried on survey programs report that they have found out such things as:

(1) Customers do not pay as much attention to rates as might be thought.

(2) Few persons know anything about company profits.

(3) Only a small minority realize that the operations of a utility are closely regulated by a utility commission.

(4) Not many persons are aware of the important part played by utilities in community affairs and in the promotion of industry and development in the area served.

Furthermore, after surveys pointed up the policies, practices or procedures which customers questioned, different reporting companies have (to list only a few examples):

(1) Changed from bi-monthly to monthly billing.

(2) Improved order-taking techniques (ten percent to 12 percent of consumers' names were found carried incorrectly on company records).

(3) Stopped field collection of delinquent accounts.

(4) Sent notices to customers prior to, or at the time of, periodic meter tests or changes.

(5) Eliminated personnel weaknesses through refinement of customer contact techniques.

(6) Replaced radio programs with television programs.

Companies which are survey-minded say that the contacts made not only provide material for future study, but also help create and assure friendly customer relations. They feel that many customers, perhaps for the first time, realize the company is interested in their ideas and opinions. Personal interviews have led to "on the spot" settlement of complaints through explanation or remedial action by the company representative. Such unpetitioned attention should influence customer opinion favorably.

These added values of survey work are important but cannot stand alone. The company must follow through by using the new knowledge it gains to improve its operations. Surveys placed in the dusty drawers of filing cabinets gather dust but not friends.

CONVENTION CALENDAR

1954

APRIL

12-14 •A. G. A. Sales Conference on Industrial and Commercial Gas, Edgewater Beach Hotel, Chicago

12-14 •National Conference of Electric and Gas Utility Accountants, Hotel Statler, Boston, Mass.

13-15 •Oklahoma Utilities Association, Southwestern Gas Measurement Short Course, University of Oklahoma, Norman, Okla.

15-16 •Sixth National Personnel Conference of the Gas Industry, Edgewater Beach Hotel, Chicago, Ill.

19-20 •A. G. A. Eastern Natural Gas Regional Sales Conference, William Penn Hotel, Pittsburgh, Pa.

19-21 •A. G. A. National Purchasing and Stores Conference, Henry Grady Hotel, Atlanta, Ga.

20-23 •A. G. A. Distribution Motor Vehicles and Corrosion Conference, Mount Royal Hotel, Montreal

22-23 •Indiana Gas Association, French Lick Springs Hotel, French Lick

26-28 •A. G. A. Mid-West Regional Gas Sales Conference, Edgewater Beach Hotel, Chicago, Ill.

26-28 •Southern Gas Association, Annual Convention, Houston, Texas

MAY

9-12 •Liquefied Petroleum Gas Association, Annual Convention, Conrad Hilton Hotel, Chicago, Ill.

Week of May 10 •A. G. A. Commercial Gas School, Chicago, Ill.

10-14 •National Restaurant Convention and Exposition, Navy Pier, Chicago, Ill. (A. G. A. will exhibit)

13-14 •Public Utilities Advertising Association, Hotel Statler, Boston, Mass.

17-21 •National Fire Protection Association, Statler Hotel, Washington, D. C.

18-20 •Pennsylvania Gas Association, Annual Convention, Pocono Manor, Pa.

19-21 •Gas Appliance Manufacturers Association, Annual Meeting, The Drake, Chicago, Ill.

20-21 •Florida-Georgia Gas Association, Spring Meeting, Miami Beach, Fla.

24-26 •A. G. A. Chemical, Engineering and Manufactured Gas Production Conference, Pittsburgh, Pa.

27-28 •Natural Gas and Petroleum Association of Canada, Prince Albert Hotel, Windsor, Ontario

JUNE

2-3 •A. G. A. Research and Utilization Conference, Hotel Statler, Cleveland, Ohio.

2-4 •Short Course in Gas Technology, Texas College of Arts and Industries, Kingsville, Texas

20-24 •Canadian Gas Association, Banff Springs Hotel, Banff, Alberta

21-22 •A. G. A. Residential Gas Section, N. Y.-N. J. Regional Gas Sales Conference, Monmouth Hotel, Spring Lake, N. J.

Personnel service

SERVICES OFFERED

Mechanical Draftsman—Young man with five years of diversified experience in mechanical, electrical field would like employment in mechanical drafting line. Excellent school, employment and personal references can be presented. More interested in chance of advancement and security than starting salary. (27) **1767.**

Safety Director—Twelve years' experience, including Director of Safety for three years at large Midwest Gas Utility. Wide knowledge of natural, manufactured and LP-Gas operations. Also well acquainted with fleet operations. **1768.**

Manufacturers' Representative—since 1938 wants gas appliance line for California headquarters Los Angeles. Residential commercial and industrial experience. **1769.**

Pilot—Desires position, executive pilot or pipeline patrol. ATR DC3, DC4, DC6, C46. Twenty thousand hours—no accidents. Sixteen years Captain major airline. Can locate anywhere. References furnished. Single. (46) **1770.**

Engineer—Desires change to challenging new job requiring rounded engineering experience in transmission and distribution of natural gas. B.S. degree, registered professional engineer, 18 years field and office experience. Will consider foreign employment. **1772.**

Management Executive or Staff Assistant to top management—Eighteen years successful experience in management, consulting, sales and production in electrical, mechanical and research fields. Top-notch administrator with proven ability to work successfully with diverse personnel. BSME; ME; MSIE. Now employed, desires challenging opportunity. **1773.**

Sales Manager—Twenty-two years' experience with gas utilities in sales, installation, training, instruction and administration in manufactured, natural and LP properties. Past three years as sales consultant. Thorough knowledge merchandising, purchasing, dealer plumber relations. Geographical location not important. **1774.**

Sales Manager—Experience in manufactured, natural and propane gases. Capable of merchandising, sales force training, installation and servicing of appliances. Experience in home heating and industrial uses of gas. Capable of dealer relation programing and promotional programing. Willing to travel, can locate anywhere. **1775.**

General Manager—With engineering background and over twenty years' experience in all phases of the manufactured gas industry. Desires permanent position in either manufactured or natural gas utility. Now available, excellent references, resumé furnished upon request. **1776.**

POSITIONS OPEN

Research Aide—To assist in supervision of industry program. Immediate opening New York City for graduate engineer 30-40 years age, personable, ability to handle people, preferably with at least five years experience in gas utility, and familiar with natural gas recovery and transmission operations. Salary commensurate with ability, good opportunity for advancement. **0718**

Street Department Superintendent—Natural Gas company located in the Middle West has open-distribution experience. However, principal ing for graduate engineer to take charge of street department construction, operation and maintenance. Salary commensurate with ability and experience. Replies will be confidential. **0719.**

Distribution Superintendent—Growing natural gas company located in the Middle West seeking the services of a graduate engineer who has had transmission and distribution experience with construction, operation and maintenance of underground structures as well as having first-hand knowledge of service department operation. Replies will be confidential. **0720.**

Sales Engineer—For home office of prominent midwestern industrial burner manufacturer. Sales correspondence, promotion, advertising with some traveling. Excellent opportunity with established firm expanding sales and new products. Submit resume of education, experience, history, and ambitions which will be held in strictest confidence. **0721.**

Project Engineer—To develop automatic gas control valves for well known midwest manufacturer. Three to five years' experience in control design and application required. Please supply resume of education, experience, earnings, objectives. Replies held in confidence. **0723.**

Plant Superintendent—Connecticut utility requires experienced gas production man capable of taking over as superintendent of plant which produces either propane air gas or high Btu oil gas supplementing natural gas supply. Prefer under 45 with technical background and distribution experience. However, principal qualification is successful supervisory experience in production. For properly qualified man this is a permanent, pleasant, and well paid position. **0724.**

Distribution Engineer—Central Canadian company, about to embark on expanding program to distribute natural gas and to convert present manufacturing facilities, will shortly require services of competent distribution engineer experienced in natural gas distribution, design and installation, gas conditioning for manufactured system, conversion, etc. Salary commensurate with experience and ability. Submit detailed resume of background experience and salary requirements, which will be held in strict confidence. **0725.**

Public Utility Engineer—Large, long established natural gas company in West has opening for experienced senior staff engineer, who under the management can plan and supervise preparation of regulatory and rate matters, personally testify before commissions and assist the management in problems of utility operations. Essential that applicant understand gas distribution and transmission operations, have a comprehensive knowledge of public utility requirements and experience in processing matters before commissions or public bodies. Position is permanent and salary open. Replies confidential with executive head of company. **0726.**

Gas Engineer—For large manufactured utility, conversion experience preferred. Must have thorough knowledge of production and distribution systems. Salary commensurate with ability and experience. Submit detailed resume of background experience, and salary requirements, which will be treated with utmost confidence. **0727.**

Gas Engineer—For progressive natural gas utility located in the Middle West with over 12,000 consumers. Wonderful opportunity for college graduate with five to ten years experience. Permanent position with eventual advancements to an executive and official position with our company for the right man. Submit experience, education, age, personal particulars and salary expectations. All replies treated confidential. **0729.**

Public Utility Accountants—Operating utility offers opportunity as Controller. Must have ability to administer accounting functions effectively and have wide experience in the public utility field. Submit a brief resume with salary requirements. All replies strictly confidential. **0730.**

Young Gas Engineer—Wanted in connection with operation of two manufactured gas plants and distribution systems. Excellent opportunity for future. Desire mechanical-chemical graduate with few years experience manufactured gas. Reply stating age, experience, education, and personal particulars. **0731.**

General Manager—To assume administrative responsibilities and complete direction of a manufactured gas utility. In addition to previous supervisory experience, must have sales and technical background. Position offers permanency and opportunity. Salary commensurate with ability and experience. Submit detailed resumé of background, experience, and salary requirements, which will be treated with utmost confidence. **0732.**

Eastern sales conference

(Continued from page 39)

with three gas utility companies conducting a joint sales promotion plan. Robert H. Lowe, The Manufacturers Light & Heat Co., and Tom Evans, Equitable Gas Co., as top sales executives of their respective companies, will tell "The Pittsburgh Story" relating present plans and progress.

W. H. Gove, divisional sales development manager, Minnesota Mining & Manufacturing Co., St. Paul, will open the afternoon meeting with a talk "Serve and Sell". He has a national reputation as an interesting and entertaining speaker, and most of his selling precepts are offered with a sugar coating of humor and lucidity.

Panel discussions will be the order for the remainder of the afternoon session on Tuesday. Mary E. Huck, The Ohio Fuel Gas Company's talented home service director, and current chairman of the A. G. A. Home Service Committee, will head a discussion on "Home Service and Sales". A second group will have W. W. Selzer, The Columbia Gas System Service Corp., New York City, presiding. The "matchless" range program will be the subject at that group meeting. A third panel will be conducted by Norman Millard, gas utility sales manager, Crosley and Bendix Home Appliance Division. His topic will be "Selling Gas Clothes Dryers".

Midwest sales conference

(Continued from page 39)

ing plans.

Intensive effort in research and promotion is being put behind gas all-year air conditioning. Notable advances in sales of gas refrigeration have resulted from improvements and innovations introduced by Servel, Inc. An interesting product presentation on these important appliances will be given by a representative of Servel, Inc.

Also included in the tentative program will be an inspirational address on the art of selling to be given by a nationally known sales and sales training speaker. The program also will include an evening of high calibre entertainment with the traditional dinner of the conference.

A.G.A. Advisory Council

FRANK H. ADAMS.....Toledo, Ohio
A. M. BEEBEE.....Rochester, N. Y.
N. B. BERTOLETTE.....Hartford, Conn.
E. I. BJORK.....Chicago, Ill.
E. G. BOYER.....Philadelphia, Pa.
GLENN W. CLARK...Oklahoma City, Okla.
STUART COOPER.....Wilmington, Del.
STUART M. CROCKER....New York, N. Y.
HENRY FINK.....Detroit, Mich.
RALPH L. FLETCHER.....Providence, R. I.
J. A. FRY.....Detroit, Mich.
J. N. GREENE.....Birmingham, Ala.
C. H. GUEFFROY.....Portland, Ore.
W. G. HAMILTON, JR.....Philadelphia, Pa.
TERRY HART.....Nashville, Tenn.
R. W. HENDEE....Colorado Springs, Colo.
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STANLEY H. HOBSON.....Rockford, Ill.
D. A. HULCY.....Dallas, Texas
F. H. LERCH, JR.....New York, N. Y.
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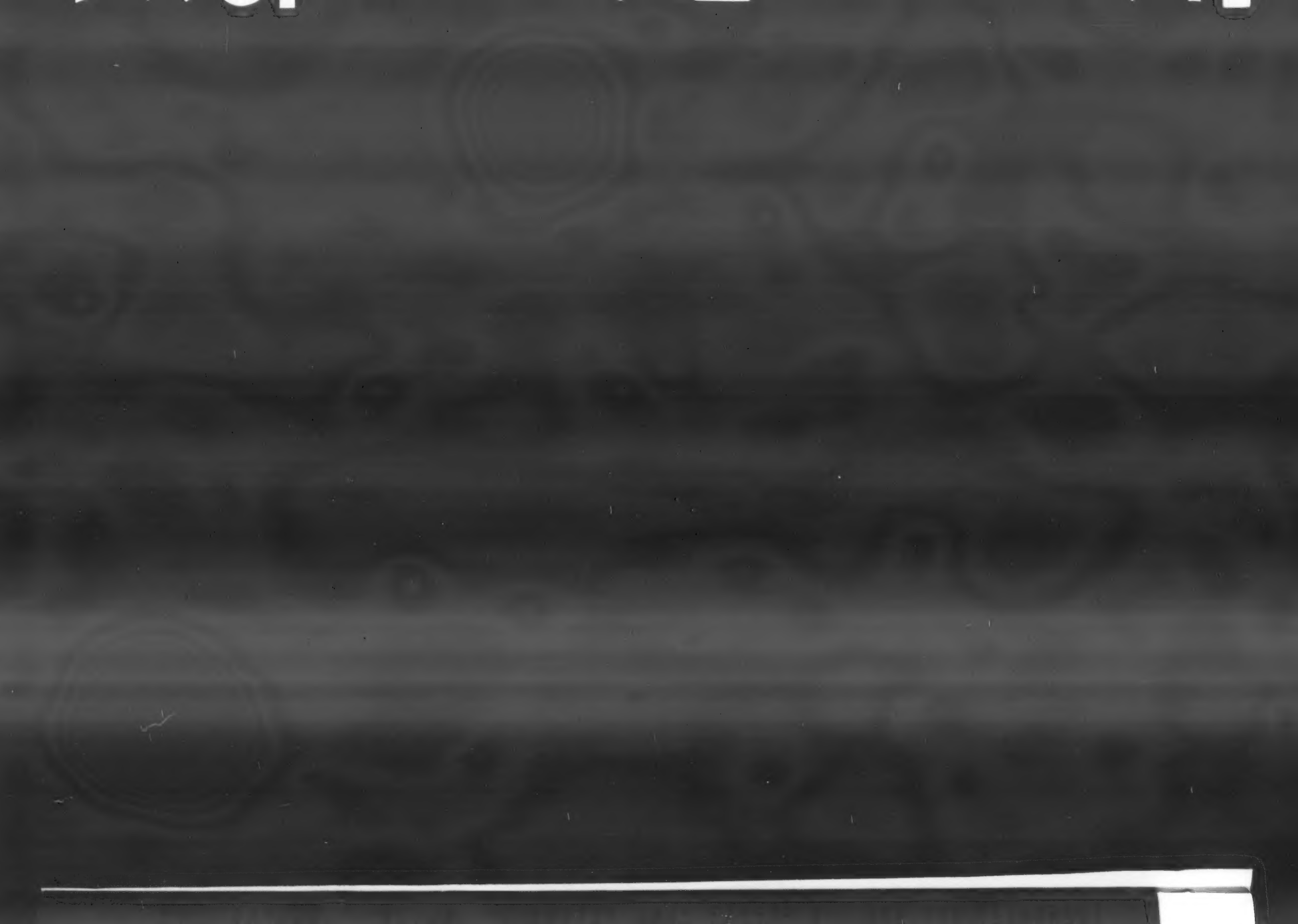
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